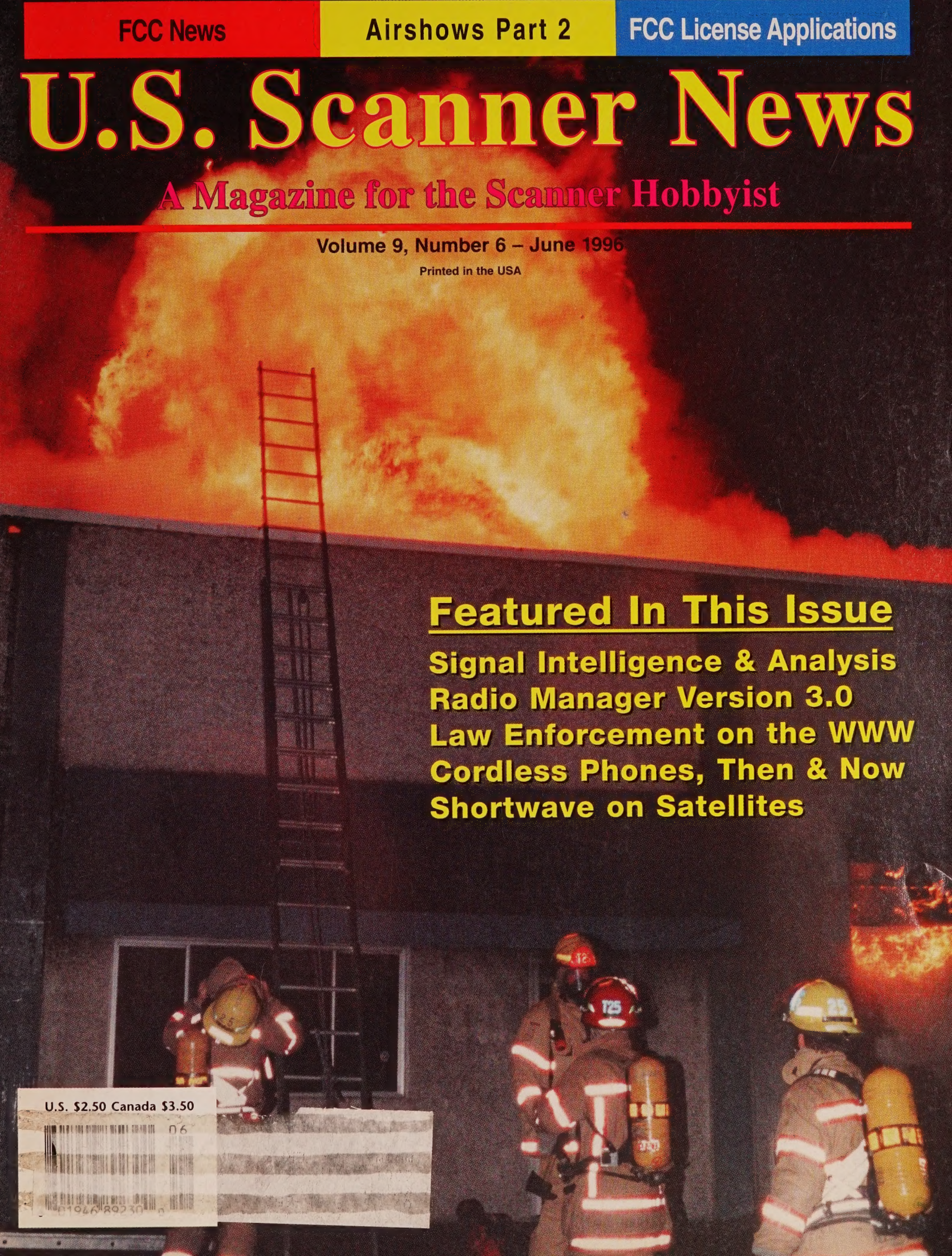
FCC News | Airshows Part 2 | FCC License Applications

U.S. Scanner News

A Magazine for the Scanner Hobbyist

Volume 9, Number 6 – June 1996

Printed in the USA



Featured In This Issue

Signal Intelligence & Analysis
Radio Manager Version 3.0
Law Enforcement on the WWW
Cordless Phones, Then & Now
Shortwave on Satellites

U.S. $2.50 Canada $3.50

OUT OF THIS WORLD
THE NEW STAR

AOR®

ASTONISHING PERFORMANCE AR2700 WIDEBAND SCANNER

The new AR 2700 from AOR is another break-through for general coverage scanners at an affordable price. It combines wide frequency coverage with many advanced features and options, including computer interface and voice recorder. With this small marvel, you will never miss important calls and conversations through the use of the optional digital voice recorder.

FEATURES:

Wide frequency range: 500kHz to 1,300MHz with various step size, 5, 6.25, 9, 10, 12.5, 20, 25, 30, 50, & 100kHz (wide FM only).
Auto Mode tuning: Comprehensive band plan has been pre-programmed to simplify the operation. The AR 2700 will automatically select the appropriate mode & channel step.
Great flexibility in programming, for Scan and Search mode: Delay, Pause and Priority intervals can be set to a specific value. Program search, Manual search, Bank link, Delay, Pause, Pass, Scan, Bank delete, Priority are provided.
High Capacity: 500 channels into 1- banks and 1- search banks. Large Multi-Purpose backlit LCD, including Battery indicator and sleep timer (automatic power off).
Illuminated keypad and beep: The keypad is illuminated with user selectable light On/Off, The keypad also features a beep On/Off or selected musical notes.
Optional Digital Voice Recording: 20 seconds of digitized recorded conversation and playback through the use of the RU-2700 option. Computer control port may be connected via an optional adaptor to a computer for remote control of the AR 2700.

Actual size:
2 1/2 x 1 1/2 x 6 5/8
Weight: 0.7lbs. w/battery

AOR, LTD.
2-6-4 Misuji, Taito-Ku,
Tokyo 111 Japan (c) 1995
AOR, LTD. Licensed
under US. Pat. 4,270,217

FOR DETAILS, CALL YOUR FAVORITE DEALER OR CONTACT:

EDCO

Electronic Distributors Inc.
325 Mill St. Vienna, Va. 22180
703-938-8105 • FAX 703-938-4525

EXCLUSIVE DISTRIBUTOR THROUGHOUT THE U.S., CANADA, AND SOUTH AMERICA.

You asked for full featured, high performance computer scanning on Windows™...

HERE IT IS!

Supports:
- Windows 3.1, 3.11 & 95
- Opto OS456 & OS535
- AOR AR3000 & AR3000A
- Icom R7100, R7000, R9000
- Icom IC706 & most others
- Drake R8 & R8A
- JRC NRD535 & NRD525
- Opto DC440 tone decoder
- AOR AR8000, AR8000INF
- Yaesu FRG9600
- Opto CX12 & OptoLinx
- IBM PC or Compatible

*No other software can deliver the features and performance of Scan*Star™ for Windows! Look at what others are imitating:*

Spectrum Analyzer • Band Scope • Monitoring Assistant with Frequency Following
Comprehensive DBASE Features • Percon & Grove CD Support • DBASE import & export
Sub list scans for split channels and trunk systems • User defined database fields
AR8000 auto unlock • AR8000 band plan editor • Control all AR8000 features
Tactical display for all-in-view picture - lock, unlock and refocus quickly with the mouse
Blend up to 25 groups and ranges in a single scan list • Scan by PL/DPL, signal strength
Mini status display uses minimum desktop space while you perform other tasks
Control up to 10 radios simultaneously • Use any serial port • Sound squelch on OS456/OS535
Proprietary Scanning Engine technology for maximum performance on Windows
Logs air time, hit count, PL/DPL and DTMF • Tones and codes saved in database
All settings per-channel • Global "macro" commands • Work with multiple files at one time
Variable size groups and banks • Upload and download to/from radio channel memory
Search-slave (handoff) with priority and preemption, use any two radios • Much more!

Take a test drive now: Download a DEMO copy from our BBS at 1-408-258-6462, or our home page at http://www.scanstar.com.

Scan*Star is a trademark of Signal Intelligence • Windows is a trademark of Microsoft Corporation
Other editions available for Windows & DOS - call for details

Scan*Star Plus for Windows and Windows95 $159.97

Plus shipping, handling and sales tax (if applicable). We accept Visa, MasterCard and American Express. UPS or FEDEX shipping. Prices subject to change without notice. Sorry, no CODs or POs.

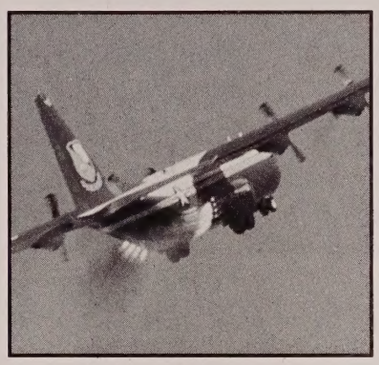
To order call: 1-408-926-5630

Signal Intelligence
P.O. BOX 640891
San Jose CA 95164

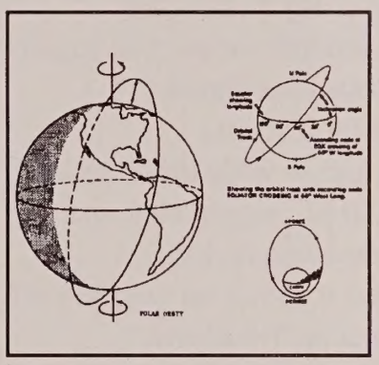
U. S. Scanner News

Volume 9, Number 6 June 1996

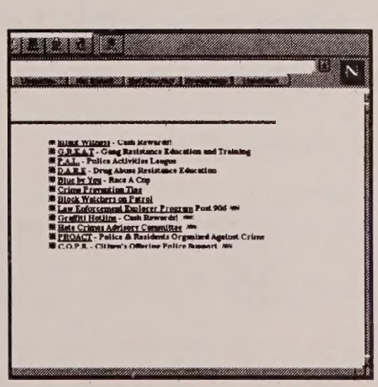
Contents



12



17



33

4 **U. S. Government** *Roger Cravens*
Signal Intelligence and Analysis

8 **Antennas** *W. Clem Small, KR6A, CET*
Conformal Scanning Antennas

12 **1996 Airshows, Part 2**
Part 2 of our Listing of Airshows in the US

14 **Public Safety Communications** *Ed Muro*
Area Profile of Washington, DC

17 **Space Communications** *Donald E. Dickerson, N9CUE*
Launch and Orbital Mechanics

20 **Transportation** *Roger West*
Madison and Milwaukie, Wisconsin Area

26 **The Other Half** *Janet Cravens*
"Freaknik", Computer Viruses, What's Next

28 **Computers** *Lonnie Gorsline*
Radio Manager, Version 3.0 Beta

31 **The Scanner Man**
Hints and Tips for the Scanner Hobbyist

33 **Internet** *Steve Baker*
Law Enforcement on the World Wide Web

35 **Beginners** *Laura Quarantiello*
Wired for Sound

37 **FCC News**
The Latest News from the FCC

42 **Technical Stuff** *Steve Donnell, WA1YKL*
Cordless Phones, Then & Now

44 **Legal Forum**
Gass Conviction Overturned

45 **Frequency Forum** *O.E. Simonson*
Public Safety License Applications

Editorial Staff

Publisher
Ken Gilbert

Managing Editor
Bob Gehri

Contributing Editors:

Antennas .....**Clem Small**
Aircraft .....**Roger West**
Beginner's Corner Laura Quarantiello
Books and Stuff .....**L. J. Smith**
Cartoons .....**Mark Juhl**
FCC Information .....**George DuBois**
Frequency Forum .....**O.E. Simonson**
Public Safety .....**Ed Muro**
Satellites .....**Donald Dickerson**
Technical Topics .....**Steve Donnell**
Text Editor .....**tracy**
The Other Half .....**Janet Cravens**
U.S. Government .....**Roger Cravens**
Layout .....**Ken Gilbert**
Logistics .....**Paul Weigel**

U.S. Scanner Publications
Editorial Offices
PO Box 14923
Portland, Oregon 97293-0923

503-203-8600
FAX 503-203-8631
Subscription Services
503-203-8620

Email ussn@pacifier.com
http://www.pacifier.com/~ussn/
BBS 360-695-0678

Notice:

The contents of U.S. Scanner News are protected under the copyright laws of the United States of America. Reproduction in whole, without written permission of the publisher, is prohibited, however, short excerpts may be reprinted with appropriate credit.

U.S. SCANNER NEWS (ISSN 1048-9908) is published monthly for $20 per year by U.S. Scanner Publications, 8285 SW Brentwood St., Portland, OR 97225-2717.

Application to mail at Second-Class Postage Rates is Pending at Portland OR. and other locations.

Although U.S. Scanner News encourages writer submissions, we can assume no responsibility for loss of unsolicited manuscripts, photographs, or drawings. U.S. Scanner News reserves the right to reprint articles in U.S. Scanner News and make them available for sale as excerpts and reprints.

Allow six weeks for change of address or delivery of first issue.

Printed in the U.S.A.

POSTMASTER: Send change of address to: U.S. Scanner, P.O. Box 14923, Portland, OR 97293-0923.

NEW! **SCANCAT GOLD** IMPROVED

Since 1989, The Recognized Leader in Computer Control

Once you use SCANCAT with your radio, you'll NEVER use your radio again WITHOUT SCANCAT!

SCANCAT supports most radios by:
AOR, DRAKE, KENWOOD, ICOM,
YAESU and JRC (NRD),
Plus PRO–2005,6 & 2035/OS456, Lowe HF–150,
and Watkins–Johnson HF–1000

SCANCAT 6.0 FEATURES

- ✶Search between any 2 frequencies
- ✶Search ANY increment
- ✶Create disk files
- ✶Import from most text formats to a working SCANCAT file.
- ✶Log Found frequencies to files while scanning
- ✶Scan Disk Files Frequencies
- ✶Spectrum Analysis to Screen OR Printer

SCANCAT – GOLD FEATURES

We simply dpn't have the space to tell you ALL the new GOLD features. SCANCAT–GOLD includes ALL ABOVE 6.0 FEATURES ***PLUS:***

- ✶Link up to 15 frequency disk files
- ✶D-Base IMPORT w/DUPLICATE filters
- ✶Scan HF&VHF Icom's simultaneously
- ✶PRINT to ANY printer or Disk File
- ✶Automatic BIRDIE LOCKOUT
- ✶Link up to 15 search banks
- ✶IMPORT virtually any database
- ✶Search by CTCSS & DCS TONES with PRO 2005,6/2035 (&ICOM/DC440)
- ✶Multiple search filters

PLUS–POWERFUL COMMERCIAL FEATURES SUCH AS:

- ✶Demographic search for frequency co-ordination and 2-way Usage Analysis
- ✶Detailed logging to ASCII type files with DATE, TIME, Sig Str. Air Time
- ✶UNLIMITED file sizes with our exclusive SCANCAT filing method
- ✶Exclusive "MACRO" control by frequency of Dwell, Hang, Resume. Sig. threshold and even 6 separate programmable audible alarms
- ✶Command line options for TIMED ON/OFF (Unattended) logging/searches.

SCANCAT IS NOT COPY PROTECTED–USE ON AS MANY COMPUTERS AS YOU NEED! SCANCAT Will run on virtually ANY 640K computer, EVEN HP–100XLT PALMTOP

SCANCAT comes ready to run ALL supports radios within only ONE program. SCANCAT makes your listening hobby a breez! Plus, the included SCANPORT allows you to convert your favorite BBS, D Base or Text FIles to a running SCANCAT file: 100+ Page manual included. Requires a 640K MS–DOS computer w/RS–232 serial port-hard disk recommended. Manufacture's interface not included.
Call or write for FREE information or our $5.00 FULLY OPERATIONAL DEMO DISK (included S/H). ORDER NOW & RECEIVE A BONUS, FOUR SCANCAT FREQUENCY FILES!

U.S. SCANNER NEWS READERS ONLY–FREE STARTER FREQUENCY DISK OF 10 FILES WITH YOUR ORDER.

SCANCAT GOLD .. $94.95
(Upgrade $24.95 From Any Version)
SCANCAT 6.0 ..... $79.95
Squelch Det Cables $24.95
OPTO Scan456 kit .. $299 ($10s/h)

AOR AR–8000 Cellular Restoration Software With SCANCAT GOLD

COMPUTER AIDED TECHNOLOGIES
P.O. BOX 18285, Shreveport, LA 71138
Orders Only (318) 636–1234 — FAX (318) 686–0449 (24 hrs)
Live Tech Support—(318) 687–2555 (9am–1 pm Central M–F)
World Wide Web http:\\www.bcrr.secret.com\scancat.html

Fearless Firemen

Every second of every minute of every hour of every day these heroes put their lives on the line for all of us.

Photo by Gordon T. Allen

Government

United States

Signals Intelligence and Analysis

How to Determine Who and What You Are Listening to.

by Roger Cravens

What am I listening to? Whom am I listening to? What is Signals Intelligence?

At least once in every scanner listener's life the first two questions will probably present themselves. I've developed several tools to assist you in your quest to find out the answer to these and other questions.

While listening to the federal government, I decided to determine, on my own, exactly who is in my area (Metro-Atlanta). I decided to limit this to a 35 to 50 mile radius of downtown Atlanta. It really didn't make any difference to me what agency was using what frequency because I wanted them all. I would determine later which agency I wanted to listen to, but for now, the task was to determine *which* agencies used the VHF (162.0000 thru 174.0000 MegaHertz) and UHF (406.0000 thru 420.0000 MegaHertz) bands. It seemed to me without knowing this it was almost a waste of time looking for anything else. (Please note that the information and techniques work for *any* frequency range.)

The first thing I needed to do was determine which frequency areas I most listened to. Those frequency ranges are listed in the previous paragraph. These ranges are the ones most used by the federal government. The 162 to 174 MHz area has become so crowded that more and more agencies have moved, or are moving, their operations from the VHF to the UHF range. Knowing this was a big help in identifying agencies using these two bands.

The next step in identification of who is using what frequency is to simply monitor the two ranges. This is easier said than done. This takes a lot of time. It is exceptionally rewarding once the list is completed, but still extremely time consuming. Actually, I found it an enjoyable exercise. As an example, I located the U.S. Postal Service using 164.1750. This was not as surprising as discovering that they were using the PL/CTCSS (squelch) tone of 103.5. I knew from experience that PL 103.5 is normally used by the Department of the Treasury, specifically the U.S. Secret Service. I strongly recommend searching smaller ranges. As an example, scan the range 164.0000 thru 166.0000 for at least a week and keep a list of your catches (see Table 2). I keep my tables in WordPerfect format, but you can use Lotus 1-2-3 or any other software that uses a table format and has the capability to sort the columns.

For those readers who are new to this hobby, I will very briefly discuss PL/CTCSS tones. "PL" stands for "Private Line." These are simply subaudible tones (in Hertz) which accompany the transmission and are used to limit interference. Two or more agencies or offices are able to use the same frequency without knowing they are interfering with each other. If agency "A" is using a PL tone of 118.8, only a transmission with that PL tone will break the squelch on agency A's radio. The following is a list of PL tones that are used:

Table 1
PL/CTCSS Tone Chart

67.0	91.5	123.0	167.9	225.7
69.3	94.8	127.3	173.8	229.2
71.9	97.4	131.8	179.9	233.6
74.4	100.0	136.5	186.2	241.8
77.0	103.5	141.3	192.8	250.3
79.7	107.2	146.2	203.5	254.1
82.5	110.9	151.4	206.5	
85.4	114.8	156.7	210.7	
88.5	118.8	162.2	218.1	

Table 2 shows my local list that I use every day. This is not a complete listing. These are the agencies that I have found to use various PL tones listed in the above table. As mentioned, it was just last week when I discovered the U.S. Postal Service here in Atlanta (one of the sub-stations) uses PL tone 103.5, and I was quite surprised by this. Whenever I find a government agency using a difference PL tone, I listen intently for as long as it takes to positively identify which agency it is. The following listing, though, is one of the best listings I've seen published in one easy-to-follow chart on this subject.

The frequencies and other information contained in Table 2 are not complete, but are used here as what I hope is a good example of a "Work in

PL-Tone	Government Agency
100.0	BATF (Bureau Of Alcohol,
123.0	BATF Tobacco & Firearms)
167.9	BATF "
192.8	BATF "
167.9	BATF "
127.3	Bureau Of Export Admin.
100.0	Bureau Of Indian Affairs
103.5	Bureau Of Indian Affairs
123.0	Bureau Of Indian Affairs
167.9	Bureau Of Indian Affairs
094.8	Bureau Of Land Mngmnt
103.5	Central Intelligence Agency
100.0	Civil Air Patrol
110.9	Civil Air Patrol
103.5	Department Of Agriculture
107.2	Department Of Agriculture
127.3	Department Of Commerce
77.0	Department Of Energy
127.3	Department Of Energy
094.8	Department Of Energy (Nest Teams)
167.9	Department Of Energy (Nuclear Material Security)
110.9	Dept. Of Geological Survey
100.0	Department Of Justice
167.9	Department Of Justice
127.3	Department Of Veterans Affairs
156.7	Drug Enforcement Agency
114.8	Environmental Protection Agency
136.5	Federal Aviation Administration
146.2	Federal Aviation Administration

PL-Tone	Government Agency
156.7	Federal Aviation Administration
156.7	Federal Bureau Of Investigation
167.9	Federal Bureau Of Investigation
173.8	FCC
192.8	FCC
156.7	Federal Executive Board
103.5	Federal Law Enforcement Training Center
151.4	Federal Law Enforcement Training Center
127.3	Federal Reserve Banking Sys.
131.8	Federal Reserve Banking Sys.
127.3	General Services Admin.
103.5	GSA Federal Supply Service
167.9	Health & Human Services
100.0	Immigration & Naturalization Svc
123.0	Immigration & Naturalization Svc
127.3	Immigration & Naturalization Svc
151.4	Immigration & Naturalization Svc
167.9	Immigration & Naturalization Svc
206.5	Immigration & Naturalization Svc
123.0	Institute Of Standards & Tech.
100.0	Internal Revenue Service
123.0	Internal Revenue Service
131.8	Internal Revenue Service
131.8	Internal Revenue Service
156.7	Internal Revenue Service
123.0	IRS/DEA Shared Frequencies (Surveillance)
156.7	IRS/DEA Shared Frequencies (Surveillance)

PL-Tone	Government Agency
103.5	National Hwy Traffic Admin.
156.7	National Marine Fisheries
206.5	National Security Agency
127.3	Nuclear Regulatory Comm.
151.4	State Department
151.4	State Department
151.4	State Department (Bureau Of Diplomatic Security)
156.7	U.S. Attorney
118.8	U.S. Capitol Police
100.0	U.S. Customs
123.0	U.S. Customs
146.2	U.S. Fish & Wildlife
136.5	U.S. Geological Survey
103.5	U.S. Marshals Service
127.3	U.S. Marshals Service
136.5	U.S. Marshals Service
146.2	U.S. Marshals Service
167.9	U.S. Marshals Service
186.2	U.S. Marshals Service
192.8	U.S. Marshals Service
203.5	U.S. Marshals Service
082.5	U.S. Postal Service
091.5	U.S. Postal Service
097.4	U.S. Postal Service
103.5	U.S. Postal Service
110.9	U.S. Postal Service
114.8	U.S. Postal Service
136.5	U.S. Postal Service
156.7	U.S. Postal Service
103.5	U.S. Secret Service

Table 2

Table Of U.S. Government Frequencies Located In & Around Atlanta, GA

Freq Out	PL/CTCSS Tone	Possible Agency
163.2500	77.0	(Control Channel)
163.6250	100.0	Immigration & Naturalization Svc
163.7250		Justice Department Immigration & Naturalization Service
163.8125	146.2	U.S. Marshalls Service (KIB211)
164.1750	103.5	U.S. Post Office
164.6500	103.5	U.S. Secret Service
164.9950	156.7	???
165.0350		Fort McPherson (Post Eng/Mntnce)
165.0850		Fort McPherson (Military Police)
165.2350		U.S. Customs Service (DVP)

Progress." They are actual frequencies monitored while I was on my lunch hour, sitting at Kroger's parking lot near an interstate here in Atlanta! You do not have to be home to gain valuable intelligence on a particular frequency range or agency.

The headings I've used in Table 2 are clear and straight forward. "Frequency Out" is used for both repeater output and as simplex transmissions (both transmitters using the same frequency). "Frequency In" is the input frequency to the repeater. It has become more and more evident that the Feds are using the input side of the repeater for simplex operation. They do this by having a channel on their radios configured so that the frequency is the same, only it is used in simplex mode and the PL tone is turned off. This prevents the transmission from keying the repeater. If the agency is using low-powered handhelds, this is quite an advantage to aid them in keeping everyone with a scanner in Atlanta from hearing what they are doing. Using this technique has really grown in recent months. I've verified this from friends in Florida and some states in the Northeast. So, always use the input frequency when monitoring the federal government in your area. "PL/CTCSS" is the tone used by the agency. "Signal Quality" is up to you to determine. As a suggestion,

you could use something like E)xcellent, G)ood and P)oor. or, some type of numbering system (1, 2, or 3) that makes sense to you. "Possible or Most Likely Agency" is just that. Who you believe at the time of reception most likely belongs to the transmission. If there is any doubt, it would be best to leave that area blank until you can spend more time listening and analyzing that particular frequency. Once the user has been confirmed, make the identification entry onto your table as soon as possible so you don't forget.

Signal Intelligence and Analysis of Data

The final phase is the analysis phase, and is one of the most challenging (and fun) because it requires you to determine first just what you want to know about the agency you are monitoring. As an example, how many people work there, what is their mission, who runs the undercover units and how many employees in each of these units? Undercover work is one of my favorites to monitor because it provides the most excitement, at least for me.

The first thing I do is make a list of all the unit and badge numbers in use. The following is a small example of a typical county sheriff's office. Real names have been removed, as well as other sensitive information.

After taking a look at this listing of units, several questions come to mind, like why are there no units labeled "140" in the series? How many females in the office? Who is part of their undercover drug unit (SID in this case), and what frequencies do they use? What days are SID most active? (Fridays and Saturdays in reality.) How is the sheriff's office split by unit number and what are their responsibilities by unit series, i.e., where do those with unit series 180 work and what do they do? Who are units 101-109? Are they the senior law enforcement staff? What are their ranks? What numbered units are assigned to which county areas (series 180 is responsible for patrolling the southwest sector of the county, as an example). How many are women or other minorities, and where do they work? What are the statistics on this breakout? What units do I appear to be missing, where are they (such as assigned to the Georgia Multi-Jurisdictional Task Force) and what is their mission? If assigned to the GMJTF, what are the frequencies for the JTF? Who does the series 200 belong to and why are there only three? Who is unit 1000 and why is there only one?

Unit # #		Badge
101	Captain John Doe	158
102		159
103		160
107		161
108		162
111		163
112		164
114		167
115		169
116	Female	170
117		171
118		172
119		173
120		174
121	SID	175
122	SID	176
123	SID	177
124	SID	178
125	SID	179
126	SID	181
131		183
132		184
133		185
134		187
135		188
136	Female	189
137		190
138	Wants & Warrants	191
139		192
150		194
151		195
152		196
153		197
154		198
156		199
157	??????	203
	??????	261
	??????	262

As you can see this can easily become quite involved. But isn't this why you're listening in the first place? If you only like to hear sirens blaring and high-speed chases, then this level of listening and analysis is probably not for you. But if you want to really get into the nuts and bolts of your local or federal government agencies and what they do, then this is the way to go about it. As an example, say your favorite federal government agency is the Secret Service. By listening regularly, over time you will know that Special Agent XYZ only arrives in your city four to seven days prior to a VIP or presidential visit. This is valuable intelligence because this guy you don't know and have never seen has just informed you that there is a high-level government official coming to your city within the next few days. Do you think if you called your local Secret Service office and asked if the VIP was planning a visit to your city this week that they would give you the correct answer? Generally, not on your life! In all likelihood, that phone call would get you investigated as a potential threat. The arrival of Special Agent XYZ will also tell you that many of the Secret Service frequencies that are normally silent will heat up very shortly providing days of listening enjoyment.

The questions you want to know should be carefully and thoughtfully written down and compared against the information you've obtained by listening. In the real world of "Listen and Learn," these questions are referred to as "Essential Elements of Information." This is really nothing more than a fancy name that pertains to a detailed list of what it is you want to know. Then, by monitoring, you will eventually get to a point where many, or most, of these questions are answered. You will probably know more about the organization than the majority of people who work there.

This is what I mean by analysis of information. Now that you have a little signals intelligence and analysis technique in your hands, your ability to enjoy your scanner (and your computer) should be greatly enhanced.

Until next month.

USSN

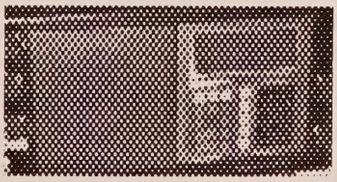
METROSOFT

Born in CyberSpace
We have the Scanners you Want

AR.5000

AOR Scanners & Accessories/Uniden Bearcat
ar8000/ar2700/ar3000a/ar5000/
bc760xlt/bc3000xlt/bc9000xlt/bct10
in stock Sony & Grundig Shortwave Multiband Radios.

Fax orders to
212-545-9594
or use our toll free number
to order:1800-791-8941



Grundig Sat700 or YB400/500

http://www.metrosft.com/metrosft/

You can see our catolog on the web and order online.

E-Mail us at metrosft@panix.com

Metrosoft Corporation 167 Madison Avenue New York NY,10016

Antennas

Conformal Scanning Antennas

Antenna Designs that Conform to the Limitations of The Environment.

by W. Clem Small, KR6A, CET

Within the field of antenna design there are certain antennas known as "conformal" antennas. A conformal antenna is one which is specially designed and shaped to conform to the surface on which it is mounted, or to fit just below that surface so as not to cause any distortion of the surface. Conformal antennas are necessary because the shapes of most antenna designs are just not practical for use in some situations. For instance, jet aircraft demand antennas with low wind-resistance. Antennas used on these fast planes are often conformed to fit the surface of the craft or to fit within a compartment of the body of the craft. At the very high speeds at which many planes fly we would find that other, less conforming, antennas would damaged, or simply be swept away, in the airstream of the aircraft.

Applications for Scanning

Occasionally we find applications for what we might call "the poor man's conformal antenna design" in scanning work. We sometimes have need to adapt antennas to conform to the available space or locations in our home, office or vehicle where we don't have sufficient space for more traditional antenna designs. We must come up with antenna designs that conform to the limitations imposed by our environment, just as the aircraft antenna designer must adapt their antennas to limitations imposed by the aircraft environment. Let's take a look this month at some of these conformal antennas used in scanning

Some of us operate our scanners in buildings where there are rules that prohibit mounting of either exterior or interior antennas in a manner that the antenna is plainly visible. Sometimes this is because a landlord doesn't want antennas showing in or on their building. At other times it is because we want a neat looking home, inside and out, and antennas just don't fit with our decor.

Whatever the reason for our restrictions on space for antennas, many scanner operators have found that they can do things like run a wire a few feet up the wall, hide it with a large poster, and the wire will function just fine for local scanning. Outside the building we can often conform a VHF-UHF antenna to the building by putting it under the eaves of a roof, in a window opening, or we may even use an aluminum window frame itself as the antenna! Loop antennas strung around the house, just under the eaves, often get high marks as conformal HF receiving antennas.

We shouldn't overlook perhaps the most completely conformal scanning antenna of all, the outdoor TV antenna. This antenna conforms to existing space completely because it was installed for the TV and is already a part of the existing environment before the scanner came into the scene. Scanner operators frequently report excellent results using an outdoor TV antenna. Just disconnect the TV antenna's lead-in from the TV, and connect it to the scanner. You may need an adapter to fit the TV antenna cable connector to your scanner receiver input. Your local Radio Shack is usually a good source of connector adapters; a few TV repair shops also stock them.

If the TV antenna is rotatable you may find it helps to rotate it for best signal strength on weak signals. A two-position coax cable switch (fig. 1A) can be used to save you the trouble of unplugging and re-plugging the antenna between the TV and scanner each time you use the antenna for scanning. The use of a signal splitter (fig. 1B), a device for feeding two receivers from one antenna, is even more convenient. By using a splitter we can have both the TV and the scanner continually connected to the one TV antenna. Small two-position coaxial cable switches and signal splitters are commonly available at hardware and large variety stores. Usually they are in the display containing TV cable and fittings.

Be careful not to confuse signal splitters with signal separators. A separator separates an antenna's signals into two or more bands and routes each band to different terminals on the sepa-

rator. A common type of separator will separate an antenna's output into a TV signal at one the separator's outputs and to the FM band for its other output. With a splitter, all signals from the antenna are available at each of the device's output terminals.

Another antenna design which adapts well to the conformal mode is the active antenna. Many of these antennas are so small, and their telescoping antenna so short, that they can easily be kept behind a desk, behind a window curtain or even in a desk drawer. Active antennas whose antenna element is a limp wire, rather than a telescoping whip, are even easier to incorporate into the existing environment.

One means of exploiting the con-

glass, and to many other surfaces as well. The tape is relatively inexpensive, and not too visually obvious.

Antenna Polarization

For VHF and UHF scanning we generally want the antenna oriented vertically to take advantage of the vertical polarization common to these bands. We should mention the HF, MF and even the LF bands here too, because these bands are also incorporated into the frequency coverage of several models of scanning receivers nowadays. On the HF and MF bands the kind of antennas we describe here will probably perform about the same whether they are oriented vertically, horizontally or at angles in between. LF antennas may show a better

can produce some good scanning, consider the following USSN reader report. Harley Bogart, from Aurora, Missouri, recently told us that he has been successful in his scanning using an antenna made of a piece of speaker wire about as long as his arm with "a TV F-connector hooked to a Radio Shack RF adapter #278-251. It works hung over the rear view mirror or hung to something in the house, and doesn't get bent or broken as easily ..(as a big outside antenna)."

Tuning Your Antenna

The length of most of the conformal scanner antennas we've discussed is determined by the available space. But you may decide that you'd like to adjust your antenna for best operation ı a particular frequency. If you want get a bit more sophisticated than just tting the antenna to the available ıace, you may want to consider mak- g the elements of the antenna sonant. This way they will respond aximally to a frequency of your ıoice. Because the length of an ele- ent is the main determinant of its sonant frequency, making an element sonant essentially means making the ement a specific length. For making a ılfwave dipole (fig. 2A) use the formu- :

Length (inches) =5616/ frequency (MHz)

ɔr example, if you are making a

❑ **YES! I Want To Receive America's #1 Monthly Scanner Magazine AND Save up to 40% Off the Cover Price!**

❑ **One Year for only $20.00** $1.66 ea (Other Countries $34.00 US funds)
❑ **Two Years for only $35.00** $1.45 ea (Other Countries $64.00 US funds)
❑ **Three Years for only $49.00** $1.36 ea (Other Countries $92.00 US funds)

❶ Save up to an additional $4.08 when enclosing payment with order and getting one Free issue for each year ordered!

1-800-890-6999

Call Now With Your Credit Card Or Send Check or Money Order To:

U.S. Scanner Publications
PO Box 14923
Portland, OR 97214-4923

VISA MasterCard AMERICAN EXPRESS

❑ Payment Enclosed❶ ❑ Credit Card❶ ❑ Bill Me

Name _____

Address _____

City, State, Zip _____

MC/Visa/Discover # _____ Expires _____

to obstruct vision through the window or windshield; it could be dangerous. Some localities have laws concerning how things may or may not be attached to vehicle window or windshield glass.

On-glass antennas, such as those discussed above, can be conveniently constructed with burglar-alarm, metallic-foil tape. This tape will stick to

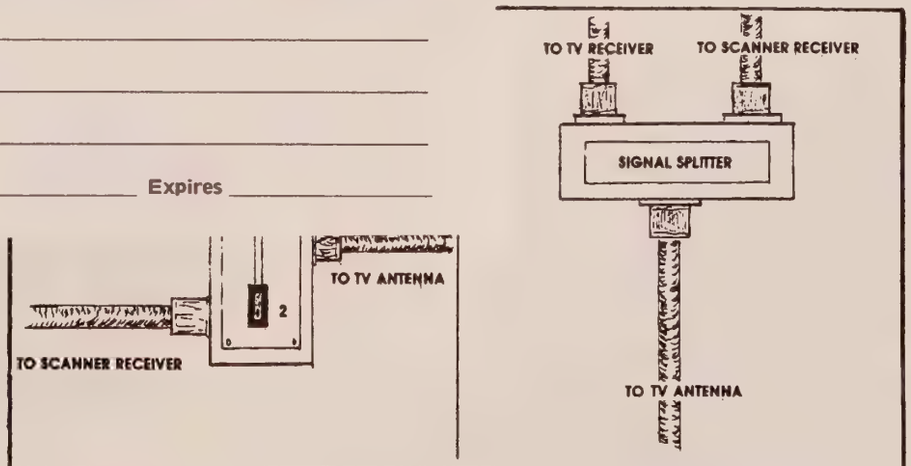


FIG. 1. Connections for a small, 2-position coaxial antenna switch (A), and signal splitter connections (B).

halfwave dipole antenna to operate at 100 MHz its total length will be 56.16, or about 56 and 3/16 inches.

For making a groundplane antenna (fig. 2B) the elements are half the length of a halfwave dipole so use the formula below to determine the length of the vertical element and of each of the radials which comprise the groundplane:

Length (inches) = 2808/frequency (MHz)

For example, if you are making a groundplane antenna to operate at 100 MHz then the vertical element and each of the radials of the groundplane will be 28.08 inches, or about 28 and 1/16 inches. By the way, the groundplane can be made with only two radials, a fact which allows you to make one with metal-foil tape on a flat surface. Actually the original groundplane design was developed with only two radials. Its designer, the legendary radio pioneer George Brown, reported that the two-radial model worked as well as a three-radial or a four-radial model. He claimed that the marketing department added the extra radials to make the antenna look more functional in order to attract potential customers!

For the halfwave dipole, 75-ohm coax is the typical lead-in used. Your scanner receiver probably matches 50-ohm cable better than it does 75-ohm cable, but the antenna matches the 75-ohm cable better than it does the 50-ohm. So either cable impedance will likely work about as well as the other, and either should work OK.

For the groundplane antenna 50-ohm cable is the common feedline. With the radials drooping about 45 degrees

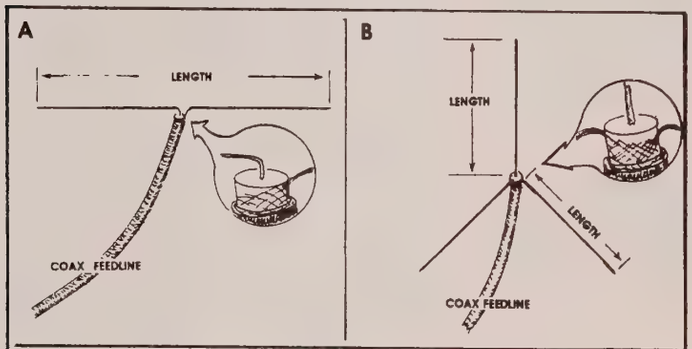


FIG. 2. Basic construction features of conformal dipole (A), and conformal groundplane (B) antennas.

there is a decent match between the antenna and 50-ohm cable. Because your scanner antenna input is also about 50-ohm impedance, 50-ohm cable gives you a good match between receiver and cable as well as between cable and antenna.

Many of the conformal scanner antennas described earlier will be whatever convenient length the scanner receiver's environment dictates. The end of the wire of the antenna itself may serve as the lead-in, and no coaxial cable is then needed. On random-length antennas where you decide to utilize coax as your lead-in cable, you may find that the point on the antenna where you attach the feedline affects the antenna's performance. For these antennas, try various connection points for the coax's center connector, and for its shield, to determine which point works best in your situation.

Just for Kicks

Just for kicks I thought you might like to hear some trivia about some of the conformal antennas designed for fast jet aircraft. Here are some of the types of conformal antennas mentioned in the second edition of Johnson and Jasiks' Antenna Engineering Handbook: Four-faced arrays; tilted antennas; tent arrays; conical antennas; cylindrical arrays; multiple planar arrays; planar-array faces; ring arrays; microstrip arrays; hemispheric dome arrays; low-profile arrays; fuselage mounted arrays; and lens-fed circular arrays. We haven't gotten anywhere near as sophisticated with our scanner antenna conformal designs as these fancy names imply, but I'll bet that we have as much fun with our scanner conformals as the antenna design engineers have with their more exotic-sounding ones.

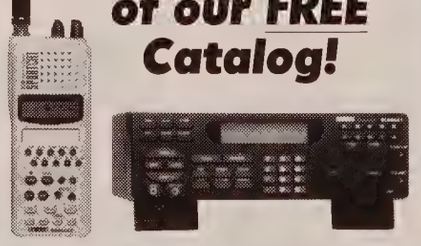
In closing, I'll express a note of thanks to the readers who have shared their antenna ideas with us for this month's column and for past columns. If you have a tip on some antenna idea that has served you well, just drop me a line and tell me about it. Who knows, it might even wind up in one of our future columns.

Best Price, Best Service, Best Total Value...Guaranteed. If You Find A Better Value Give Us A Call!

We Are Proud To Carry These Full Lines

ICOM AOR Bearcat

Call, Write or Fax Today For Your Copy of our FREE Catalog!



800 • 559 • 7388

To Order Write, Call or Fax:
P.O. Box 551419, Dallas, TX 75355-1419 • Local: 214-348-8800 • Fax: 214-340-5460

TUCKER ELECTRONICS

If it's *on* the Radio, it's *in*

MONITORING TIMES®

News and events happen around the world constantly and you need the right resources to hear it as it happens. ***Monitoring Times*** magazine provides you with the information you need to gather the news and events first hand, without the corrupting influence of news media bias. ***MT* can help you set up your own worldwide monitoring post to hear anything from where the fire trucks are going in your neighborhood to what's going on in other countries.** *MT* provides equipment reviews to help you choose the right equipment; advice to help beginners get started; frequency listings so you know where to tune in; as well as interesting features, stories and tips from the experts. The information in *MT* is both useful and timely— appropriate for beginners and experts alike. **Take the fast lane around the world and in your own community with *Monitoring Times*. Exciting news and events are out there waiting to be heard.**

To subscribe call 1-800-438-8155 (US and Canada);(704) 837-9200 (foreign) or mail this subscription form to *Monitoring Times,* P.O. Box 98, Brasstown, NC 28902.

- ❒ 1 year $23.95
- ❒ 2 years $45.95
- ❒ 3 years $67.45
- ❒ 1 year foreign $53.95(US funds/air mail)

- ❒ Check/M.O.
- ❒ Mastercard
- ❒ Visa
- ❒ Discover Card

Credit Card# _____

Exp. Date _____

Name _____

Address _____

City _____ **State** ___ **Zip** _____ **Country** ____

Signature _____

Monitoring Times

Published by Grove Enterprises

Cover Story

1996 Airshows

This Years Performances, in Part 2 of our Complete Airshow List for the Entire U.S.

by USSN Staff

Date	Show Name	City	ST
7/27/96	Kansas City Festival of Flight	Kansas City	MO
7/27/96	Georgian Biy Airshow	Meaford	ON
7/27/96	Whidbey Sea'n Sky Fest	Oak Harbor	WA
7/27/96	Prince George Airshow	Prince George	BC
7/27/96	Sprinqfield Air Rendezvous	Sprinqfield	IL
7/27/96	Tri-Cities Water Follies	TriCities	WA
7/31/96	UNK	Watson Lake	YT
8/01/96	Big Skyfest	Billings	MT
8/01/96	Int'l Fly-In Convention	Oshkosh	WI
8/01/96	Three Rivers Regatta	Pittsburgh	PA
8/03/96	Lethbridge/Chrysler Int'l Airshow	Lethbridge	AB
8/03/96	Selfridge ANGB Air Show	Mt. Clemens	MI
8/03/96	N. Bay Heritage Festival & Airshow	North Bay	ON
8/03/96	Seafair Key Bank Air Show	Seattle	WA
8/03/96	Westover ARB Open House	Westover ARB	MA
8/03/96	Great New England Airshow	Wilbraham	MA
8/07/96	Kamloops International Airshow	Kamloops	BC
8/09/96	Abbotsford Int'l Airshow	Abbotsford	BC
8/10/96	Upward Air Show	Eau Claire	WI
8/10/96	Aircraft Past & Present	Elyria	OH
8/10/96	Goshen Airshow	Goshen	IN
8/10/96	Seafair Key Bank Air Show	Seattle	WA
8/10/96	Yuba City Air Fair	Yuba City	CA
8/16/96	Wings of Eaqles Air Show	Batavia	NY
8/16/96	NAS Miramar Airshow	San Diego	CA
8/17/96	Armed Forces Air Show '96	Avoca	PA
8/17/96	AirShow '96	Kingsport	TN
8/17/96	Air Minden	Minden-Douglas	NV
8/17/96	Gathering of Memories	San Marcos	TX
8/18/96	Little Rock AFB Air Show	Little Rock	AR
8/18/96	World Aerobatic Championships	Oklahoma City	OK
8/20/96	UNK	Summerside	PE
8/23/96	Sussex Airshow	Sussex	NJ
8/24/96	Raleigh County Air Fair	Beaver	WV
8/24/96	Prairie Air Show	Bloomington	IL
8/24/96	Chicago Air & Water Show	Chicago	IL
8/24/96	Cape Cod Air Show	Falmouth	MA
8/24/96	Wings of Freedom Air Shaw - CAF	Frederick	MD
8/24/96	Hawthorne Air Fair	Hawthorne	CA
8/24/96	Central Oregon Air Show	Redmond	OR
8/24/96	Rutland Air Fair	Rutland	VT
8/24/96	Nova Scotia Air Show	Shearwater	NS
8/24/96	Magic of Flight '96	Spokane	WA
8/27/96	UNK	Gaspe	QC
Date	Show Name	City	ST

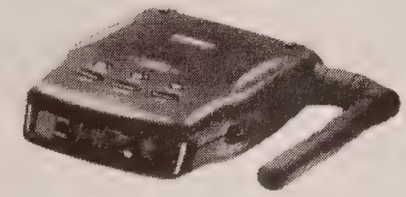
8/30/96	Mississippi Sky Parade	Jackson	MS
8/30/96	St. Louis Cty Fair & Air Show	St. Louis	MO
8/31/96	Alabama International Air Show	Anniston	AL
8/31/96	Cleveland National Air Show	Cleveland	OH
8/31/96	Canadian Int't Airshow	Toronto	ON
9/01/96	North Bend Air Show	North Bend	OR
9/01/96	St Louis Ct Fair & Air Show	St. Louis	MO
9/01/96	Canadian Int'l Airshow	Toronto	ON
9/04/96	UNK	Amhertsburg	ON
9/06/96	Cascade of Colors	Carbondale	IL
9/07/96	Dallas A/S - Flight Through Time	Dallas-Love Fd	TX
9/07/96	Ft. Smith Regional Air Show	Ft. Smith	AR
9/07/96	Airshow of the Ozarks	Harrison	AR
9/07/96	Pierfest Sea 'n Air Show	Huntington Beach	CA
9/07/96	Northern Illinois Skyfest	Rockford	IL
9/07/96	Empire St. Aero Museum of Flight	Scotia	NY
9/07/96	Thunder Bay Air Show	Thunder Bay	ON
9/12/96	Reno Nat'l Champion Air Races	Reno	NV
9/14/96	College Park Air Fair	College Park	MD
9/14/96	Martin State	Essex	MD
9/14/96	Harvard Aviation/Military Fair	Fairfield	NE
9/14/96	Grand Junction Air Show	Grand Junction	CO
9/14/96	Autumn Warbirds Airshow	Orange County	NY
9/14/96	Santa Maria Air Fair	Santa Maria	CA
9/14/96	Whiteman AFB Open House	Whiteman AFB	MO
9/15/96	Aerospace Day	Fairchild AFB	WA
9/18/96	Tucumcari Aii Show	Tucumcari	NM
9/20/96	Baton Rouqe Balloons and BBQ	Baton Rouge	LA
9/21/96	Birmingham Aero Club Airshow	Birmingham	AL
9/21/96	Gathering of Warbirds Airshow	Fresno	CA
9/21/96	Wings over Houston	Houston	TX
9/21/96	Manassas Air Show	Manassas	VA
9/21/96	McGuire AFB Open House	McGuire AFB	NJ
9/21/96	Planes, Trains & Automobiles	Reading	PA
9/21/96	Colorama Fly-In	Rhinelander	WI
9/21/96	Great Topeka Airshow	Topeka	KS
9/21/96	NAS Oceana Air Show	Virginia Beach	VA
9/22/96	Transportation Exhibition	South Bend	IN
9/28/96	New York State Int'l Airshow	Elmira Heights	NY
9/28/96	Flagstaff Airshow	Flagstaff	AZ
9/28/96	California Coast Air Show	Half Moon Bay	CA
9/28/96	NAS Atlanta Air Show	Marietta	CA
9/28/96	Confederate Air Force Airshow '96	Midland	TX
9/28/96	UNK	Nashville	TN

Continued on page 13

Date	Show Name	City	ST
9/28/96	Tennessee Aviation Days	Smyrna	TN
9/28/96	French Valley Air Fair	Temecula	CA
10/02/96	Concord Int'l Air Festival	Concord	NE
10/05/96	Charleston Air Expo 96	Charleston AFB	SC
10/05/96	Airshow Daytona	Daytona	FL
10/05/96	Kirtland AFB Open House	Kirtland AFB	NM
10/05/96	Aviation & Aerospace Day	Lompoc	CA
10/05/96	Shoals Airshow	Muscle Shoals	AL
10/05/96	NAS Pt. Muqu Airshow	Oxnard	CA
10/05/96	Page-Lake Powell Air Affairs	Page	AZ
10/05/96	California Air Show	Salinas	CA
10/06/96	Air Power Expo '96	Cannon AFB	NM
10/06/96	Charleston AFB Open House	N. Charleston	SC
10/09/96	PAPPA Convention/Showcase	Antioch	IL
10/09/96	UNK	Hays	KS
10/12/96	El Paso Int'l Amigo Airshow	El Paso	TX
10/12/96	International Airshow '96	Fort Worth	TX
10/12/96	Muskogee Air Show	MuskoGee	OK
10/12/96	San Francisco Fleet Week	San Francisco	CA
10/19/96	Altus AFB Open House	Altus	OK
10/19/96	The Great American Air Affair	Bowlinq Green	KY
10/19/96	Columbus AFB Open House	Columbus	MS
10/19/96	Edwards AFB Open House	Rosamond	CA
10/20/96	Vance AFB Open House	Vance AFB	OK
10/26/96	NAS Jacksonville/Balloon Tour USA	Jacksonville	FL
10/26/96	Travis AFB Open House	Travis AFB	CA
10/26/96	Sheppard AFB Open House	Wichita Falls	KS
11/02/96	Louisiana National Airshow	Lake Charles	LA
11/02/96	1996 N'Awlins Airshow	New Orleans	LA
11/03/96	Toys for Tots Open House	Long Beach	CA
11/08/96	Miami Air Show	Homestead AFB	FL
11/08/96	Blue Angels Homecoming Air Show	NAS Pensacola	FL
11/09/96	Maxwell AFB Open House	Montgomery	AL
11/10/96	Pope AFB Open House	Pope AFB	NC

USSN

Our UNIDEN BEARTRACKER 10 Will Get *Your* 20



$169.99 c.o.d.

BCT-10

BC9000XLT	$399.99	BC148XLT	$ 89.99
BC890XLT	$249.99	BC3000XLT	$349.99
BC760XLT	$199.99	BC220XLT	$219.99
BC700A	$159.99	SC150Y	$159.99
BC560XLT	$ 79.99	BCT7	$159.99

Scanner Antennas

Solarcon Window Clip Antennas	$14.99
Solarcon Magnet Mount Antennas	$14.99
Solarcon Mirror Mount Antennas	$14.99
647N Full Frequency Antenna	$29.99
651 Magnet Mount Antenna	$17.99
SA-1 Base Scanner Antenna	$24.99

Call For A *FREE* Catalog

1-800-626-6343

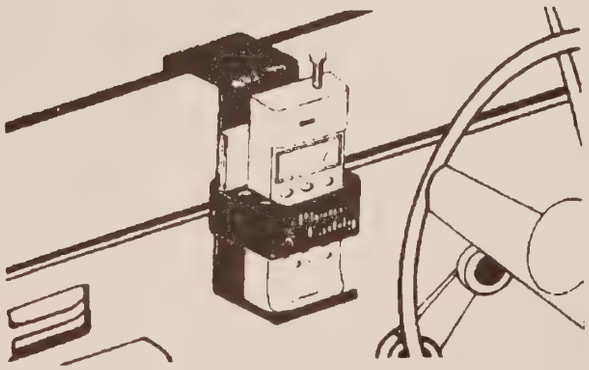
COPPER ELECTRONICS, INC.

3315 GILMORE INDUSTRIAL BOULEVARD • LOUISVILLE, KY 40213 • 502-968-8500

PHONE CADDY

The Phone Caddy will hold almost any handheld scanner or radio. Comes with a note pad and indexed booklet to write frequencies or names in. The compartment behind the radio holds a note pad and two pencils. 2 13/16″ across by 1 11/16″ deep.

$9.95 + $3.00 S&H. Send check or money order or call 800-890-6999 with



Dealer Sales Available

U.S. Scanner Publications
PO Box 14923
Portland, OR 97293-0923
800-890-6999

PUBLIC SAFETY COMMUNICATIONS

Area Profile: Washington, D.C.

by Ed Muro

Albany County Sheriff's dispatcher Frank Casey, a twenty-seven year veteran, has been awarded the APCO International Telecommunicator of the Year Award for 1995. Frank's story is one of triumph and fortitude. You see, Frank has been blind since birth. Albany County Sheriff Jim Campbell had nothing but praise for the 27-year veteran. Mr. Casey has been recently promoted to Communications Supervisor. Keep up the good work, Frank.

APCO (Associated Public Safety Communications Officials, Inc.) has announced that they have completed Phase 1 of their attempts to set a protocol of standards for public safety radio, which they have termed APCO 25. Ronald Rand, APCO's Executive director, made the announcement at the national convention held in Detroit last summer. The project, which was conceived in 1989, is aimed at using narrower bandwidths than are currently being used and to use a standard digital protocol that would be compatible with all systems. The plan set out to reduce bandwidth to 12.5 kHz during Phase 1 and 6.25 kHz during phase 2. This will make room for additional public safety systems within the radio spectrum. It has been rumored that Ericsson Communications, a large manufacturer of trunked systems, is not happy with the project and has decided not to participate. We will keep you posted.

Corrections Department: (No, this is not where you will read about inmate uprisings.) In the April issue on page 35, the correct frequency for the Paterson, New Jersey Fire Department should read 465.6125 with a PL of 162.2. In addition, the NYC Fire Department fire marshals can be found on 460.575.

Hot off the Press

"Monitoring The Feds, How to use your scanner or shortwave radio to eavesdrop on the government," by John C. McColman. John has done it again. Known for his work as a co-author of the Scanner Master Guide covering the Virginia & Metro D.C. area, he has given us a great reference source for Federal Government frequencies. Two days ago I picked up a copy of this very informative and extremely interesting book. Unfortunately, time won't permit me to do a complete review now but look for one in a future issue. I did have an opportunity to peruse the book, and knowing John's reputation for accuracy, I can recommend this book highly. The book starts out with a generalized description of the organizational structure of the government along with an overview of government radio usage. In addition, John offers tips on monitoring strategies, tips on researching information and finding new frequencies and a glossary of terms commonly used by the Feds. Section Two contains detailed information on each agency such as: B.A.T.F.; the F.B.I.; the U.S. Secret Service; N.A.S.A; and many other federal agencies. Finally, at the end of the book, there is a master frequency list where you can look up frequencies in numerical order. This feature is very useful when discovering communications on an unknown frequency. For more information, stay tuned, or contact the publisher: Tiare Publications, P.O. Box 493, Lake Geneva, WI 53147.

Update

9th Annual Winter SWL Festival: The annual three-day affair was just held in downtown Kulpsville, PA and it proved to be a great convention. Organized by Bob Brown, "Dr. DX" (Harold Cones) and Kris Field, this is an event you won't want to miss next year. While dubbed the Shortwave Winter-Fest, it is much more than that. It is virtually a "who's who" in radio. This year there were eleven official seminars, as well as plenty of time for unofficial schmoozing and a separate room for displays from various radio retailers, such as Gilfer Shortwave and various organizations, including The All Ohio Scanner Club (AOSC) and the North American Shortwave Association (NASWA). The festivities concluded with a banquet dinner followed by presentation from Ian McFarland (most recognized for his work with Radio Canada International) and the grand finale was a live broadcast of the "Spectrum" radio show from the banquet hall.

While I found all of the sessions interesting, those that would be of interest to the scanner hobbyist included the Beginners Forum by Uncle Skip Arey. Skip detailed the various ways of setting up your radio shack, as well as pointing out the importance of planning for the future. Then there was the official scanner forum where Jon Cohen detailed the preparation and strategy for event-based scanning, such as the St. Patrick's Day Parade, Memorial Day Weekend, The Fourth of July, etc. Skip Arey gave a demonstration of the Optoelectronics Scout and the AR-8000 handheld scanner while Mark Meece, Tom Swisher, and Dave Marshall fielded general questions on scanning and computer-aided scanning.

Those in attendance included many authors and other personalities in the radio hobby. The Scanner Scum coalition, as it is known, included Skip Arey (Monitoring Times), Dave Marshall (Scanner Master-Ohio Pocket Guide),

Continued on page 16

Area Profile: Washington, D.C. and Vicinity

E.M.S., Hospitals

Charlestown	155.340
D.C. Hospital	155.220
Mary Washington Hospital	463.175
Naval Medical Center	140.275
Naval Medical Center	140.725
Naval Medical Center Paging	148.275
Washington Co. Hospital Sec.	155.400
Washington Hospital	151.955
Alexandria	45.560
Prince Georges Co. EMS	495.0125
Cumberland	33.040
Stanton	37.900
Washington Co. Res. & Hlth Dept	155.280
Washington, D.C.,EMS Prim. Freq	852.6125
Washington, D.C. Area Ch 1.	457.600
Washington, D.C. Area Ch 2.	467.775
Washington, D.C. Area Ch 3.	467.825
Washington, D.C. Area Ch 4.	467.900
Washington, D.C. Area Ch 5.	467.850

Parks & Recreation:

Fredrick County	151.460
Maryland Fish and Game	159.240
Maryland Fish and Game	172.875
Maryland Forest Service	32.530
Montgomery County Park Police	159.315
Prince George County Pk Police	159.315
Shenandoah National Park	166.900
Virginia - Division of Forestry	151.475
Virginia - Division of Forestry	159.330
Washington County	151.460

Fire Services:

Alexandria	154.430
Alexandria	460.525
Alexandria	465.525
Allegany County	33.680
Allegany County	155.830
Allegheny County	33.780
Amissville F.D.	33.820
Arlington Base	154.130
Arlington County	153.890
Arlington County	154.130
Arlington County	154.280
Arlington County	155.865
Back Creek Valley F.D.	33.900
(Also Rockville Centre, New York)	
Baker Heights F.D.	33.900
Baltimore City	154.145
Baltimore Pike	33.680
Baltimore Pike	33.780
Baltimore Pike	153.830
Barton Hose Co 1	33.680
Barton Hose Co 1	33.780
Barton Hose Co 1	153.830
Bay District F.D.	33.720
Bay District F.D.	33.940
Bedford Road VFD	33.940
Berkeley Co., W.V. Fire & Rescue	33.900
Berkley Springs	33.900
Bethesda -Silver Spring, M.D.	154.160
Bowling Green	33.680
Boyce	46.100
Braddock Heights	46.340
Brandy	33.820
Brunswick	46.340
Bryans Road	46.360
Burlington	46.140
Calvert County	33.600
Calvert County	33.940
Carrol County, M.D. Ch 1	33.940
Charles County	46.360
Charles County	46.420
Charles Town	153.890
Chillum Adelphi VFD	33.740
District Of Columbia Primary	154.190
District Of Columbia	154.235
District Of Columbia	154.280
District Of Columbia	154.400
Fairfax	46.080
Montgomery County, M.D.	155.340
Montgomery County, M.D., Primary	154.160
Montgomery Co., M.D., Fireground	153.950
Montgomery Co., M.D., Fireground	155.520
Prince Georges County	153.830
Prince Georges County	154.280
Prince Georges County	494.7875
Prince Georges County	494.8375
Prince Georges County	495.0625
Prince William County, Base	154.325
Prince William County, Mobile	154.370
Rockville, M.D.	154.160
Saint Mary's County	33.720
Saint Mary's County	33.940
Washington County Ch. 1	33.860

Law Enforcement:

F-1, U.S.Capitol Police	164.800
F-2, U.S.Capitol Police	164.625
F-5, U.S.Capitol Police	164.600
F-7, U.S.Capitol Police	162.250
Alexandria	155.070
Alexandria	453.550
Alexandria	458.550
Alexandria	460.050
Alexandria	460.075
Alexandria	460.375
Alexandria	465.050
Alexandria	465.075
Alexandria	468.375
Allegany County	451.825
Allegany County	456.825
Allegheny County	39.180
Annandale.	460.125
Arlington.	453.275
Arlington.	453.500
Arlington.	453.825
Arlington County	39.500
Arlington County	154.740
Arlington County	453.600
Arlington County	458.550
Arlington County	458.600
Charles County Sheriff Ch 1	45.640
Charles County Sheriff Ch 2	45.400
Charles Town	37.180
Clark County	39.200
Clark County	39.500
College Park	453.575
Colonial Beach	39.360
Colonial Beach	39.500
Columbia District	155.430
County Detective	460.175
Crisfield.	39.100
Culpeper County	39.420
Culpeper County	39.500
Culpeper County	39.640
Culpeper	39.600
Cumberland	155.430
Detective	453.325
Dist of Columbia	460.025
Dist of Columbia	460.200
Dist of Columbia	460.250
Dist of Columbia	460.350
Dist of Columbia	460.425
Dist of Columbia	154.890
Dist of Columbia	155.250
Dist of Columbia	155.415
Dist of Columbia	156.030
Dist of Columbia	156.090
Dist of Columbia	158.790
Dist of Columbia	158.850
Dist of Columbia	159.030
Dist of Columbia	159.150
Dist of Columbia	458.550
Dist of Columbia	460.100
Dist of Columbia	460.150
Dist of Columbia	460.275
Dist of Columbia	460.325
Dist of Columbia	460.400
Dist of Columbia	460.450
Dist of Columbia	460.475
Dist of Columbia	460.500
Dist of Columbia	465.100
Dist of Columbia	465.150
Dist of Columbia	465.275
Dist of Columbia	465.325
Dist of Columbia	465.450
Dist of Columbia	465.475
Dist of Columbia	465.500
Dist of Columbia	467.975
District Of Columbia	39.020
District Of Columbia	460.200
Easton	154.950
Fairfax	45.980
Fairfax	453.975
Fairfax	458.550
Fairfax County	39.540
Fairfax County	453.250
Fairfax County	453.550
Fairfax County	460.125
Fairfax County	460.225
Fairfax County	460.300
Fairfax County	465.125
Fairfax County	465.175
Fairfax County	465.225
Fairfax County	465.300
Falls Chruch	156.150
Falls Chruch	458.550
Fauquier County	36.540
Fauquier County.	39.500
Franklin County.	45.620
Franklin County.	956.000
Franklin County.	959.600
Frederick County	39.020
Frederick County	39.100
Frederick County	39.280
Frederick County	39.500
Fredericksburg	154.725
Fredericksburg	159.476
Germantown	495.337
Hagerstown, M.D. Ch. 1	155.790
Hagerstown, M.D. Ch. 2	155.745
Hampshire County	37.280
Hardy County	37.280
Herndon	458.550
Jefferson County	37.180
Jefferson County	37.280
Keeper	37.280
Keyser	37.280
La Plata	45.620
Laurel	453.150
Loudoun County	39.500
Loudoun County	39.540
Loudoun County	39.780
Manassas	453.200
Manassas	453.425
Manassas	458.200
Manassas	458.550
Martinsburg	37.160
Martinsburg	37.180
Martinsburg	453.525
Martinsburg	458.525
Maryland State Police	39.300
Maryland State Police	39.320
Maryland State Police	39.400
Mineral County	37.180
Mineral County	37.280
Montomery Co., Silver Spring, M.D	494.912
Montgomery County	154.710
Montgomery County	155.520
Montgomery County	155.640
Montgomery County	458.550
Montgomery County (Bethesda)	494.862
Montgomery County, M.D.	495.312
Page County	39.400
Page County	39.500
Prince George's County Sheriff	155.580
Prince George's County Sheriff	158.730
Prince Georges County	154.830
Prince Georges County	154.950
Prince Georges County	155.010
Prince Georges County	155.580
Prince Georges County	155.655
Prince Georges County	155.685
Prince Georges County	155.730
Prince Georges County	158.790
Prince Georges County	158.730
Prince Georges County	453.550
Prince Georges County	458.550
Prince Georges County	494.537
Prince Georges County	494.562
Prince Georges County	494.662
Prince Georges County	494.687
Prince Georges County	494.737
Prince Georges County	494.887
Prince Georges County	495.087
Prince Georges County	495.137
Riverdale	155.565
Rockville	39.320
Rockville	154.710
Rockville.	495.237
Rockville County	494.712
Romney, W.V	37.180
Romney, W.V	37.280
Romney, W.V	42.100
Romney, W.V. (Repeater)	42.860
Saint Mary's County	39.460
Shenandoah	39.400
Shenandoah	39.500
Stafford County	39.400
Stafford County	39.500
Takoma Park	39.760
Takoma Park	39.820
Talbot County	39.580
Tysons Corner	460.175
Tysons Corner, VA	460.175
Tysons Corner, VA	460.600
U S Park Police #1	166.725
(These are the guys who found Vince Foster's Body)	
U S Park Police #2	166.925
U S Park Police #3	167.025
U S Park Police #4	166.850
Virginia State Police	159.135
Virginia State Police	159.165
Warren County	39.500
Warren County	39.840
Washington County	39.180

The first person who writes in with updates or corrections to this list will receive a FDNY car window decal.

John McColman & Lynn Burke (Scanner Master Virginia-Metro D.C Frequency Guide), Bill Cole (AOSC), Jon Cohen, Don Schimmel (Popular Communications), Tom Swisher (Fire Call), Mark Meece (AOSC), and me.

One of the organizers of the event has offered U.S. Scanner News table space in the display area for next years event, so plan to come out and meet me there. For information on next year's tenth anniversary celebration contact : Winter SWL Festival, P.O. Box 591, Colmar, PA 18915.

From The home office in Enid, Oklahoma. . . . The Top Ten reasons to attend the 10th annual SWL Winter-fest:

#10. You can touch Ian McFarland;
#9. You can drool while you look at the vast array of AR-8000's on hand;
#8. You may win some neat, expensive raffle prizes;
#7. You can sit around with the guys and consume beverages while listening to Radio Aztecca;
#6. You can have your copy of "Monitoring the Feds" autographed by John McColman;
#5. You can get Uncle Skip's new book "Radio Monitoring For Beginners" autographed;
#4. Get your scanner blessed by Father John;
#3. You may meet a babe in the hotel lounge;
#2. The Kulpsville area is loaded with many things to monitor, including a nuclear power plant;
#1. Eat some shoofly pie and scrapple;

These are some of the frequencies I personally monitored while at the Fest:

33.700	Towamencin Fire Department
33.600	Montgomery County - Fire
154.130	Montgomery County - Fire
155.640	Lansdale Police
46.040	Montgomery Co. EMS
45.460	Montgomery Co. Sheriff (east)
45.380	Montgomery Co. Sheriff (north)
45.260	Montgomery Co. Sheriff (west)
154.965	Towamencin Police
155.385	University of PA Hospital air MedEvac
155.220	Lehigh Valley Hospital &
155.265	Hahnemann Hospital Med-Evac
291.700	NAS Willow Grove Appr. & Dep.
359.600	NADC Warminster Tower
154.145	Philadelphia Fire Dept Disp. (north)

For the Philadelphia Police Department I used the search feature of my scanner set between 453.050 and 453.950.

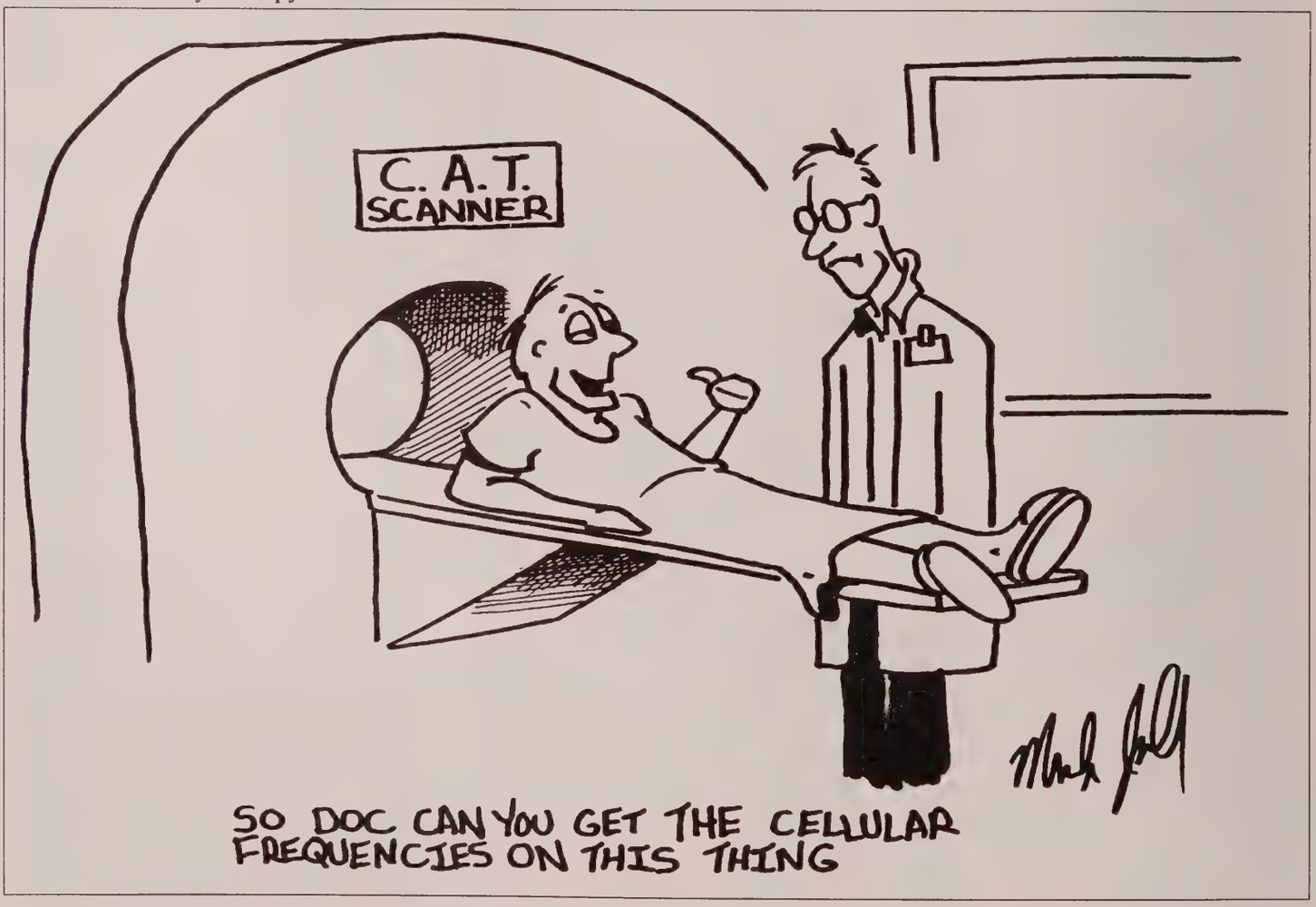
These frequencies are reported to be in use for the Limerick Nuclear Power Plant, but I did not personally verify them:

451.075; 451.625; 507.3125; 507.3375; 507.3625; 507.3875 507.4125; 507.4625.

As always, feel free to write in with any questions or comments via the Internet at: edmuro3@aol.com or by U.S. Mail, c/o the U.S.S.N. address listed on Page 3.

If you are in the New York Tri-state area don't forget to check out the weekly M.L.I.S. scanner net on the amateur radio frequency of 146.805 MHz on Tuesday night at 8 PM. Nationally, Thursday night there is a scanner net in the America On-Line (AOL) ham radio club conference room starting around 9 PM eastern time.

USSN



SPACE COMMUNICATIONS

Launch & Orbital Mechanics

An Overview of U.S., Russian and European Launch Vehicles.

by Donald E. Dickerson, N9CUE

The most difficult and expensive part of space flight is getting there. Whether you want to place a small Amateur Radio satellite or the Space Shuttle into orbit, the launch vehicle, fuel and ground-station operations are the greatest challenge for engineers—and the greatest cost. A launch vehicle often costs more than the satellite it carries. The average satellite will cost over $80 million. The launch vehicle will cost an additional $120 million. The cost of operating ground stations will run upwards of $30 thousand a year per satellite for even the simplest of spacecraft.

The US fleet of launch vehicles consists of nine rockets: the Scout; Delta; Atlas; Atlas Centaur; Atlas Agena; and at least four variations of the Titan Rocket, our most powerful. These are used to place satellites and scientific payloads into orbit. The Trident, Polaris and Poseidon rockets (launched from the Cape) are used for the delivery of warheads.

The Scout is the smallest of the fleet and is used for light military payloads. The Delta is used to launch weather and telecommunications satellites. Atlas and the Titan, which have the greatest lift capability, are used for a variety of medium to heavy satellites. The Titans carry the Advanced Tiros weather satellites, KH-11 spy satellites and several other reconnaissance spacecraft into orbit. The upper-stage Centaur has been used on Satellites launched from the Space Shuttle after being carried into orbit.

Space Shuttle
All Frequencies in MHz

121.750	
145.550	2287.500
243.000	2217.500
259.700	15.0003.4
279.000	
296.800	

MIR Space Complex

121.750	10.820.0
142.417	11.320.0
130.162	
143.625	13.520.0
143.825	
145.550	13.700.0
145.840	

Russian Launch Vehicles

The Russians use several variations of four basic launch vehicles. The A-1 rocket is used for weather and scientific payloads. The A-2 carries all manned crews into orbit in the Soyuz spacecraft as well as the unmanned Progress supply ships and space tugs used to resupply and reposition the Mir space stations. It also carries certain ILINT and Photo Recon satellites aloft. The C-1 & F-1 are standard vehicles for the launch of military communications and short-duration recon satellites and are used in the Russian ASAT (Anti-Satellite) program. These launch vehicles are capable of launching six to eight communications satellites simultaneously. Finally, the largest operational launch vehicle is the D-1. It is responsible for lifting the space stations and deep-space probes into orbit. The Russians are working on a new launch vehicle. A new large Apollo-type launcher, which may be used for lifting large components of a space complex and spacecraft destined for other planets, is under development.

NASA VHF Support Frequencies
All Frequencies in MHz

Shuttle (Back-Up)	Kennedy	Aircraft	Ships
259.7	162.6	117.8	148.5
279.0	164.1	121.5	140.0
296.8	171.2	164.8	

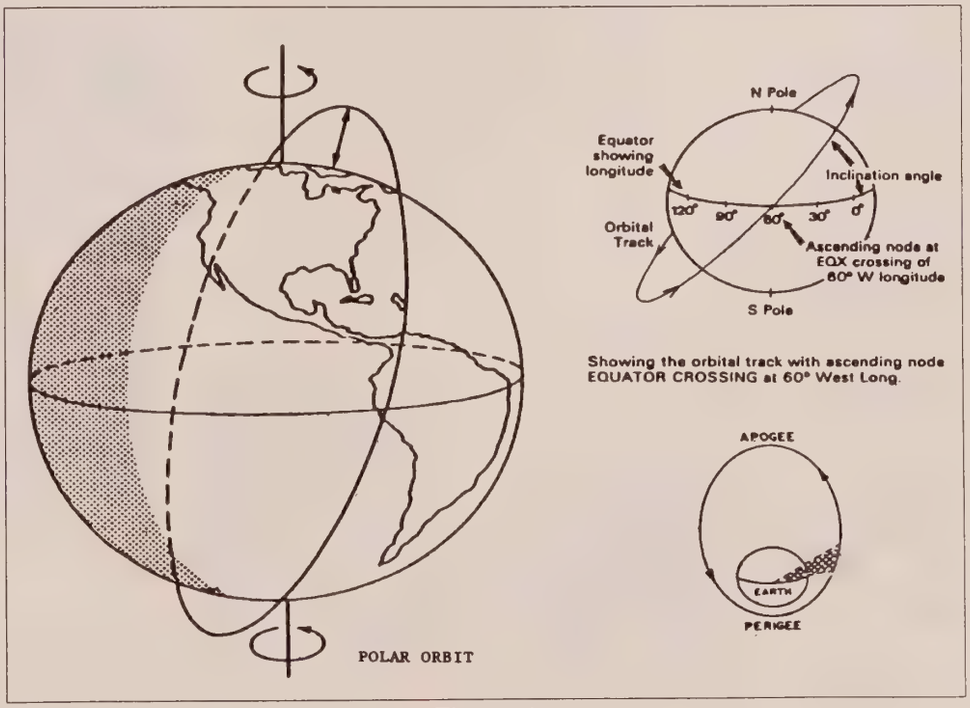


Figure 1

European Space Agency (ESA)

The Europeans use, and quite successfully I might add, a single launch vehicle, the Ariane. it is a three stage rocket built by the French Company "Arianespace" for the European Space Agency. The Ariane is a reliable launch vehicle which, with the present shortage of "rides" available, has customers waiting in line for their services. A ride will cost you just under $100 million.

Orbits

There are three standard earth orbits: Polar; Geo-Stationary; and Molniya. (Seen in Figure 1)

POLAR

The Polar orbit is the most commonly used. The Shuttle, scientific and reconnaissance satellites, space stations and communications satellites, both military and Amateur, use it. Shown in figure 1, this orbit is one in which the spacecraft will fly near both the North and South Poles during each orbit. The point at which a spacecraft orbits the Earth between the north Pole and the Equator is called the inclination and is measured in degrees. It is the angle formed by the orbital plane of the satellite with respect to the Equator. Most scientific and reconnaissance satellites maintain an inclination of 70 to 85 degrees. The Russian Mir space orbits at 51 degrees.

MOLNIYA

One of the most unusual orbits used is the Molniya. It is named after the Russian TV Satellite system which first used it. It is a highly elliptical orbit which takes the spacecraft in two large loops during each pass. At its closest point to earth, a satellite in such an orbit will maintain an altitude of 200 miles or so. On the high altitude loops it may reach 40,000 miles. The Russian's still have TV and military communications satellites using this orbit.

GEOSTATIONARY

The orbit which may be most familiar to you is the Geostationary orbit. It is used by TV, telecommunications and the GOES weather Satellites. These spacecraft are positioned over the equator at an altitude of 22,300 miles. This keeps the them orbiting the Earth at the same speed at which the Earth turns in space, giving the impression that they are stationary.

In order to give you an idea of what it takes to get a satellite into a Geostationary orbit, we will take a look at the launch and orbit phase of the European Space Agency's Ariane rocket.

The Countdown

T–25 hr 30 mn 1st & 2nd stages are fueled.

T–7 hr 50 mn Inertial guidance systems aligned.

T–6 hr 00 mn Tower moves away from rocket.

T–4 hr 55 mn Calibration of telemetry equipment.

T–3 hr 20 mn 3rd stage fueled.

T–1 hr 05 mn LV's telemetry and radar telecommand systems turned on.

T–0 hr 01 mn LV's Onboard power supply turned on.

T–0 hr 00 mn 04 s Umbilical cord detached.

T–00 Ignition

T+00 hr 00 mn 03 s Lift-off.

T+02 mn 25 s 1st stage burn out.

T+2 mn 40 s Guidance system takes over.

T+4 mn 14 s Nose fairing jettisoned.

T+4 mn 46 s 2nd stage burn-out.

T+14 mn 17 s 3rd stage burn-out.

T+15 mn 30 s Separation of payload.

The trajectory of the Ariane launch can be seen quite clearly in figure 2. The rocket is launched to the east, across the Atlantic. In order to put the spacecraft into a Geostationary orbit, it is first necessary to put it into a highly elliptical orbit with a perigee of 200 to 300 miles and an apogee of 22,300 miles. When the spacecraft is at apogee its kick motor is fired, placing it into a Geostationary position.

A satellite is considered in orbit and maintains orbit only as long as the spacecraft's velocity equals the gravitational pull of the Earth. When both forces cancel each other out, orbit occurs.

The ground station at the launch site in Guiana, South America controls the launch vehicle until it places the payload into orbit. After the first orbit is complete and before the satellite is placed into its permanent position, the ESA control center at Tolouse, France takes over control of the satellite. They are responsible for placing the spacecraft and maintaining its orbit.

Both NORAD and NASA's Goddard Space flight Center near Washington, D.C. keep track of all orbiting spacecraft. They also track nearly as many pieces of space junk as satellites. This junk is largely spent upper stages of previous satellite launches or dead satellites. These must be accurately tracked in order to keep them from colliding with future launches.

USSN

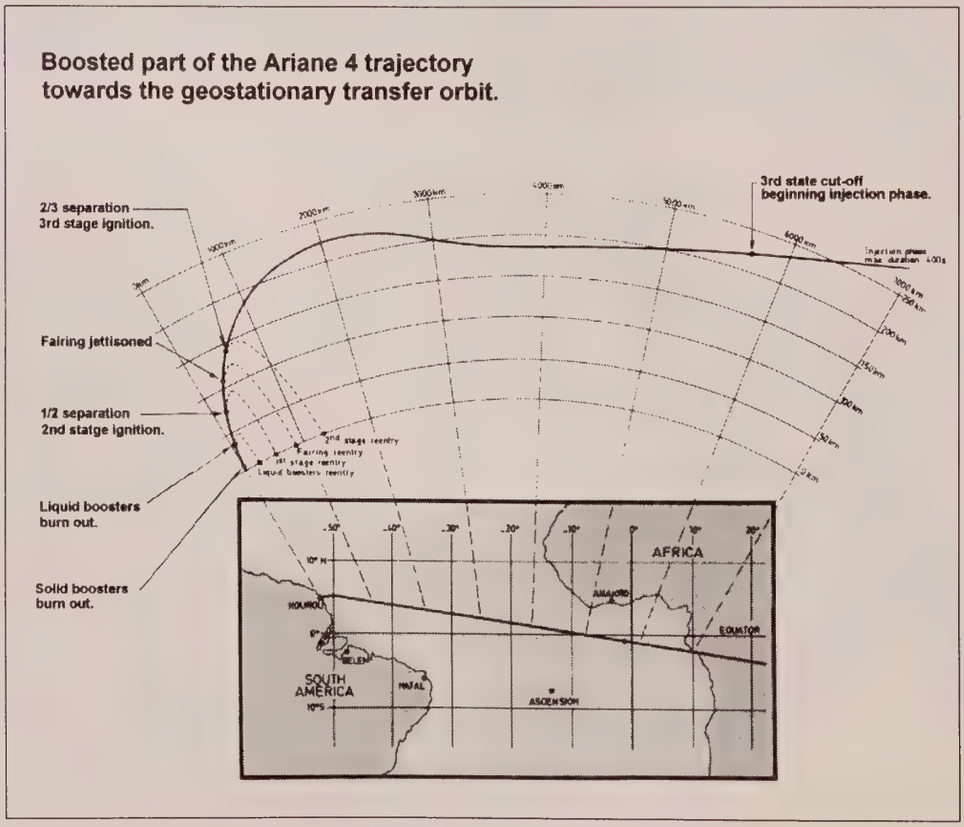


Figure 2

SPECTRUM

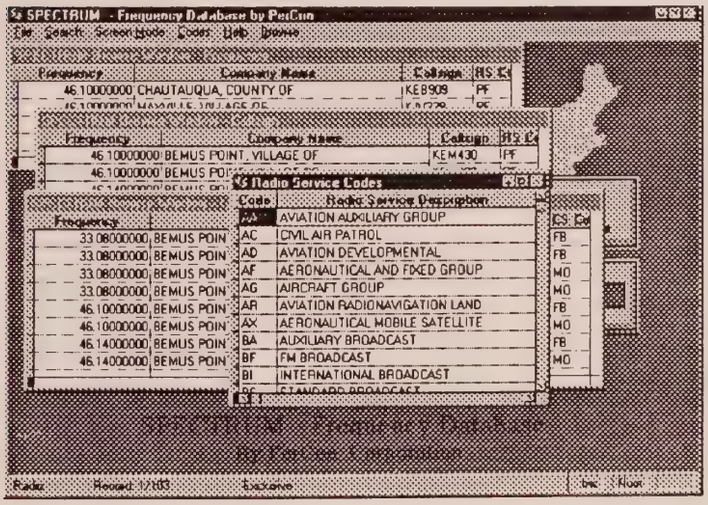
Frequency Database CDROM
For WIN / DOS / MAC

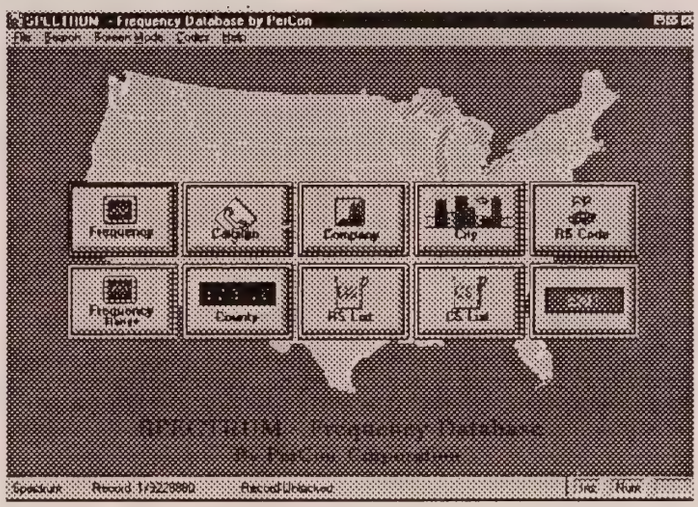
Operating System Compatible

SPECTRUM *is a frequency database with over 3 Million records. Data is extracted from the FCC Master Frequency Database. The Database includes records for Police, Fire, Hospitals, Businesses, State and Local Governments, Airlines, Utilities, Hotels, Theme Parks, Taxis, Freight Companies, Phone Companies, and much more. Frequencies range from DC to Daylight.*

Fields include: Frequency, Callsign, Radio Service Code, Class Of Station, DBA Name, Transmitter City / County / State, Transmitter Latitude and Longitude,and Number of Mobiles for Vehicle, Marine, Air, Portable and Pagers.

The system for DOS/WIN requires a 386 Processor or above, VGA video display(CGA/EGA/VGA for DOS),4 Meg of Memory, a minimum of 4 Meg of Hard Disk, CDROM drive, mouse, a printer for reports, Dos 6.0 or above and Win 3.1 or above. For the MAC, System 7.5, CDROM drive, Mouse, 4 Meg of Hard Disk minimum, and 4 Meg of memory.





SPECTRUM *comes as a complete system, requiring no installation or setup. The program is executed from the CDROM. The program allows the user to extract data for display in a Browse Screen,Export to a UFDBF, or to 80 / 132 column printed reports. Data can be extracted by a Frequency/Range in a Region, Callsign in a State, DBA Name in a State, Radio Service Code in a City, all Frequencies in a County, or all Frequencies in a City. The user is prompted for all required search parameters. The program is extremely easy to use and is suitable for entry-level as well as advanced scanner enthusiasts.*

The database is in a Dbase III , IV ,or FoxPro Compatible file format. Export to UFDBF.

PerCon also has New Ham, Ham/Repeater, Aviation and other Frequency Database CDROMS.

$ 29.95

Additional S&H For UPS Blue is $7.50

PerCon Corporation
4906 Maple Springs / Ellery Road
Bemus Point, NY 14712
(716) 386-6015 Fax (716) 386-6013

Transportation

Madison, Milwaukie, Wisconsin Area

One of our Nations Leading Producers of Dairy Products, Wisconsin Leads All States in Bean and Sweet Corn Production.

by Roger West

The State Of Wisconsin is located in the northern interior of the United States in the upper Midwest. It is bounded on the North by Lake Superior and the Upper Peninsula of Michigan, on the South by Illinois, on the West by Iowa and Minnesota, and on the East by Lake Michigan. Wisconsin extends approximately 295 miles East to West at its widest point, and approximately 320 miles North to South. Wisconsin took its name from its principal river, the Wisconsin, whose name had been derived from an Ojibwa Indian word thought to mean "gathering of the waters." Wisconsin's nickname, the Badger State, comes not from the wild animal of that name found in small numbers in the upper Midwest, but from the nickname given to lead miners of the 1830's who burrowed into hillsides looking for shallow deposits of ore.

As urbanized as the state has become, Wisconsin is one of the nation's leading dairy states and consistently leads in the production of green peas, string beans, and sweet corn.

About 80% of the agricultural receipts come from livestock and livestock products, especially milk and cheese. Leading field crops include corn, hay, oats, barley, soybeans, tobacco, and wheat. Wisconsin is also a large producer of vegetables and fruits, including potatoes, grown in the central part of the state, and sweet corn, beets, green peas, snap beans, cabbage, carrots, lima beans, cranberries, cherries, apples, and cucumbers.

Because of pollution, over-fishing, and the depredations of the sea lamprey, the state's commercial fishing industry, located primarily along lakes Michigan and Superior, has been in decline since 1945. Sportfishing, however, thrives in the state; major game fish caught are bass, muskellunge, perch, sturgeon, and trout.

Wisconsin is also an important industrial state. Among its leading products are non-electrical machinery, food products, paper products, fabricated metal products, and transportation equipment. The main area of industrial activity is in the Southeastern part of the state, particularly the Milwaukee metropolitan area. Major paper-production areas are in the Fox River and Wisconsin River valleys. The Badger State is also a leading beer-producer. Milwaukee has long been a major brewing center, and there is also beer production in La Crosse. Most of Wisconsin's coal, oil, and natural gas comes from sources outside the state. The state's energy needs are supplied by steam-generating plants and nuclear power. The state's first hydroelectric plant was built in Appleton on the Fox River in 1882, but today most of the state's power comes from non-hydroelectric sources. Most of the state's important commercial minerals are nonmetallic-sand, gravel, and building stone. Iron and zinc-lead ores are mined and vast quantities of copper and zinc have been discovered recently in the Precambrian rocks of the North.

In the last couple of years Wisconsin's Indian Gambling Casinos have been expanding statewide.

Wisconsin's major interstate highways are Interstate 90 and Interstate 94, which cross the state in a Northwest-Southeasterly direction. Milwaukee's General Mitchell International Airport is the busiest of the state's airports. Airlines also serve Green Bay, Madison, and other Wisconsin cities.

Rail mileage reached a peak during the early 20th century and has since declined. Nevertheless, most of Wisconsin's cities and villages still receive railway freight service. Amtrak also provides passenger service to some Wisconsin cities.

The Badger State's ports, including Milwaukee, Green Bay, and Superior, handle significant water-traffic tonnage on the Great Lakes. Coal, limestone, petroleum, and clay come in; outgoing cargoes include iron ore, wheat, corn, processed foods, and manufactured items. The Mississippi River remains an important route for barges navigating from Minnesota to the Gulf of Mexico. Wisconsin has barge ports at Alma, La Crosse, Prairie du Chien, and Cassville.

Madison, Wisconsin is the capital of Wisconsin, and the county seat of Dane County, on the isthmus between Monona and Mendota Lakes, 75 miles to the West of Milwaukee. Madison is

the transportation and industrial center of the surrounding agricultural and dairy region and has factories engaged in the manufacture of farm machinery, surgical equipment, batteries, and food products. The city has numerous cultural, educational, and research institutions, notably the University of Wisconsin, Edgewood College, the State Historical Society Museum, and several hospitals and medical centers. Among the noteworthy public buildings is the white granite State Capital.

Milwaukee is the largest city and industrial center in the state and is the county seat of Milwaukee County. It is located on the shore of Lake Michigan, approximately 80 miles North of Chicago, Illinois. The city is also located along a natural harbor formed by three rivers, the Milwaukee, Menomonee and Kinnickinnic, as they enter Lake Michigan.

Milwaukee's economy is based on heavy industry and the manufacture of durable goods. Milwaukee is also the country's leading manufacturer of durable goods and the leading manufacturer of diesel engines, but power-generating equipment, mining machinery, agricultural equipment, auto parts, outboard motors, and motorcycles are also important products. The city has a very active grain market. The city serves as the wholesale and retail center for Eastern Wisconsin and the upper peninsula of Michigan and as a communications center for most of the upper Midwest. The city is served by extensive transportation facilities. The Port of Milwaukee, now part of the St. Lawrence Seaway System, has undergone considerable expansion since the seaway was opened in 1959. Exports include grain, coal, processed food, machinery, and equipment.

Milwaukee is famous for its ethnic diversity and ethnic festivals are major community events. The city is the home of the Milwaukee Symphony Orchestra, and the Florentine Opera Company, both housed at the Performing Arts Center, as well as the Milwaukee Repertory Theater. Local fans support Milwaukee's professional baseball and basketball teams.

Several higher-education institutions are headquartered in Milwaukee, including the University of Wisconsin-Milwaukee and Marquette University. An extensive county park system, the domed Mitchell Park Horticultural Conservatory, the Annunciation Greek Orthodox Church (which was designed by Frank Lloyd Wright) and the War Memorial Center of Eero Saarinen are sources of pride to the residents of Milwaukee.

By Air

(all times shown are Eastern Standard Time)

BLACKHAWK AIRFIELD, MADISON

REMARKS- Attended 8 AM - Dusk.
PILOT ALERTS!! ** Tall trees in vicinity of airfield!!
** Deer on and in vicinity of airfield!!

CTAF	122.700
Appr/Dep (Madison 6 AM - 11 PM)	124.000
Appr/Dep (Chicago 11 PM - 6 AM)	133.300

DANE COUNTY REGIONAL AIRPORT TRUAX FIELD, MADISON

[176th FIGHTER SQUADRON and the 128th FIGHTER WING of the WISCONSIN AIR NATIONAL GUARD]
AIRFIELD OPERATIONS:
REMARKS- Attended continuously.
Wisconsin National Guard Operations 7 AM - 4 PM Monday-Wednesday, 7:30 AM - 10 PM Thursdays and Fridays, and closed Saturdays and Sundays.
PILOT ALERTS!! ** Tall trees in vicinity of airport!!
** Flocks of birds on and in vicinity of airport!!
** Lighted concrete barriers on Wisconsin Air National Guard Ramp!!
** Noise abatement area!!
** When tower is closed contact Green Bay Flight Service Station for emergency services and contact crash/rescue on 119.300!!

CTAF	119.300	
UNICOM	122.950	
ATIS	124.650	278.300
FSS	122.600	255.400
Appr	133.300	380.350
	120.100	350.300
	124.000	396.000
Dep	133.300	380.350
	126.850	318.100
Tower	119.300	257.800
Ground	121.900	348.600
Clearance	121.620	
Wisconsin Air National Guard Operations		392.200
Wisconsin National Guard Operations	40.80FM (Medevac Helicopters)	
	123.400	
Air Tactical	34.10	238.200
	34.55	298.700
	34.60	322.700
	36.85	396.900

GROUND OPERATIONS:

Fire Dept/Crash Crews	173.5875
Security	163.4875
Medics	173.5375

GENERAL MITCHELL INTERNATIONAL AIRPORT, MILWAUKEE

[126th AIR REFUELING SQUADRON and the 128TH AIR REFUELING WING of the WISCONSIN AIR NATIONAL GUARD; 95th TAS and the 440th OF THE AIR FORCE RESERVE]
AIRFIELD OPERATIONS:
REMARKS- Attended continuously.
Air force reserve operations 7 AM - 4 PM Monday-Friday, except holidays.
Air national guard operations 8 AM - 2:30 PM Tuesday -Thursday, 8 AM - 2 PM Fridays, Saturdays, and closed Sundays, Mondays, and holidays.
PILOT ALERTS!! ** Tall trees in vicinity of airport!!
** Noise abatement areas..... all approaches are over noise sensitive areas!!
** Flocks of birds on and in vicinity of airport!!
** Contact base operations prior to entering air force reserve ramp on 376.100!!
** Contact UPSET CONTROL on 139.500 or 351.200 20 minutes prior to entering air national guard ramp!!

ASOS (weather)	126.400	
UNICOM	122.950	
ATIS	126.400	
FSS	122.400	255.400
	122.650	
Appr	126.500	379.800
	118.000	

Dep	119.650	379.800
	125.350	307.000
Tower	119.100	325.800
Ground	121.800	348.600
Clearance	120.800	
Operations Control Center of the air national guard	139.500	
	(UPSET CONTROL)	351.200
440th TAW Command Post	(INSTIGATOR)	376.100
95th TAS operations	(SWEET)	376.100
Air Refueling Routes		
AR-321	(F-1)	276.500
AR-321	(F-2)	282.700
Brochure Operations		252.975
		298.775
		283.775
GROUND OPERATIONS:		
Base operations	163.0125	
Maintenance	148.100	
	413.200	
	413.300	
	165.1375	
	163.5875	
	163.5625	
Security	163.4625	
	163.4875	
	163.9625	
Fire Department/Crash/ Crews/Trucks	163.5125	
	173.5875	
Crew Alerts	413.450	
Operations (cargo)	150.200	
Motor Pool	148.050	

LAWRENCE J. TIMMERMAN AIRPORT, MILWAUKEE

REMARKS- Attended May - September 7 AM - 10 PM, and October - April 7 AM - 9 PM.
RESTRICTIONS!! Airport is CLOSED to jet aircraft without prior permission!!
PILOT ALERTS!! ** Tall trees in vicinity of airport!!
** Flocks of birds on and in vicinity of airport!!

CTAF	120.500	
UNICOM	122.950	
ATIS	128.300	
FSS	122.100	
Appr/Dep	125.350	307.000
Tower	120.500	
Ground	121.700	

RAINBOW AIRPORT, MILWAUKEE

REMARKS- Attended 9 AM - Dusk.
PILOT ALERTS!! ** Tall trees in vicinity of airport!!

CTAF/UNICOM	122.800	

JOHN H. BATTEN AIRPORT, RACINE

REMARKS- Attended continuously.

CTAF/UNICOM	123.075	
Appr/Dep	119.650	379.800
Visual Flight Rules (VFR) Advisory Service	120.150	
Clearance	120.150	

KENOSHA REGIONAL AIRPORT, KENOSHA

REMARKS- Attended 7 AM - 9 PM.
PILOT ALERTS!! ** Tall trees in vicinity of airport!!
** Flocks of birds on and in vicinity of airport!!
** 440' radio tower located 2.6 nautical miles Southeast of airport 1/2 nautical mile left of Runway 32 centerline!!

CTAF	118.600	
UNICOM	122.950	
ATIS	127.175	
FSS	122.100 (receive only)	
Appr/Dep	119.650	379.800
Tower	118.600	353.600
Ground	121.875	
Clearance (9:30 PM-7 AM)	118.600	

WEST BEND MUNI. AIRPORT AND HELIPORT, WEST BEND

[AVIATION UNIT OF THE WISCONSIN NATIONAL GUARD]
REMARKS- Attended 7 AM - Dusk.
Wisconsin National Guard Operations 6:30 AM - 4 PM Monday and Tuesday, 6:30 AM - 10 PM Wednesday - Friday.
PILOT ALERTS!! ** Tall trees in vicinity of airport!!!
** Unlighted crane 195' above ground level located 1.75 miles Southwest of airport indefinitely!!
** When using military helipad, military helicopters use pattern to the North or West of airport!!
** Helipad is located on the airport!!
** Helicopter training in progress from Sunrise to Sunset Daily below 5,000'!!
** Glider training in progress from Sunrise to Sunset Daily below 5,000'!!

CTAF/UNICOM	122.800	
FSS	122.100	255.400
Appr/Dep	125.350	307.000
Clearance	124.750	
Army Operations	40.90	241.000
	46.70	
	123.450	

HAHN SKY RANCH AIRPORT, WEST BEND

REMARKS- Unattended.
PILOT ALERTS!! ** Tall trees in vicinity of airport!!
** Ultralight activity on and in vicinity of airport!!

CTAF	122.900	

SAUK-PRAIRIE AIRPORT, PRAIRIE DU SAC

REMARKS- Attended irregularly.
PILOT ALERTS!! ** Tall trees in vicinity of airport!!
** Frequent auto traffic crossing runway and taxiway!!
** Ultralight activity on and in vicinity of airport!!

CTAF	122.900	

MONROE MUNI. AIRPORT, MONROE

REMARKS- Attended April - October 7 AM - 5 PM, November - March 8 AM - 4 PM.
PILOT ALERTS!! ** Tall trees in vicinity of airport!!
** Ultralight activity on and in vicinity of airport!!

CTAF/UNICOM	123.050	
Appr/Dep	126.000	327.000

VERONA AIRPORT, VERONA

REMARKS- Unattended.
PILOT ALERTS!! ** Airport is NOT PLOWED in Winter!!
** Ultralight activity on and in vicinity of airport!!
** Balloon operations normally early AM and PM daylight hours!!

CTAF	122.900	

NOTE: Do any of the readers know what frequencies they are using for balloon activities at this airport? If so, please write to me at: Roger West, P O Box 291, Amery, Wi. 54001-0291

WAUKESHA COUNTY AIRPORT, WAUKESHA

REMARKS- Attended 6 AM - 9 PM.
Army reserve operations 6 AM - 9 PM Monday - Friday, except holidays!!
PILOT ALERTS!! ** Tall trees in vicinity of airport!!
** Deer on and in vicinity of airport!!
** Coyotes on and in vicinity of airport!!

CTAF	123.700	
UNICOM	122.950	
Appr/Dep	125.350	307.000
Tower	123.700	
Ground	121.600	
Clearance (9 PM - 6 AM)	128.700	
Army reserve operations	40.95	

BURLINGTON MUNI. AIRPORT, BURLINGTON

REMARKS- Attended 8 AM - Dusk.
PILOT ALERTS!! ** Tall trees in vicinity of airport!!
** Waterfowl on and in vicinity of airport!!
** Traffic departing Runway 11 avoid overflight of city!!
** Noise abatement area!!

CTAF/UNICOM	122.800	
Appr/Dep	125.350	307.000

LAKE LAWN AIRPORT, DELAVAN

REMARKS- Attended June - August 7 AM-9 PM September-October 7 AM-8 PM. Nov.-Jan. 7 AM - 6 PM, and February - May 8 AM - 4 PM.
PILOT ALERTS!! ** Tall trees in vicinity of airport!!

CTAF/UNICOM	122.800	
Appr/Dep	121.000	

BELOIT AIRPORT, BELOIT

REMARKS- Attended Dawn-Dusk.

CTAF/UNICOM	122.700	
Appr/Dep	121.000	327.000

BARABOO WISCONSIN DELLS AIRPORT, BARABOO

REMARKS- Attended 8 AM - Dusk.
PILOT ALERTS!! ** Tall trees in vicinity of airport!!
** Glider activity on and in vicinity of airport!!

AWOS-3 (weather)	118.325	
CTAF/UNICOM	123.000	
FSS	122.100	
Appr/Dep	133.300	380.350

BRODHEAD AIRPORT, BRODHEAD

REMARKS- Unattended.
PILOT ALERTS!! ** Tall trees in vicinity of airport!!
** Runways not plowed Winters!!
RESTRICTIONS!! ** Open to sky equipped aircraft only in Winter!!

CTAF	122.900

CAPITAL AIRPORT, BROOKFIELD

REMARKS- Attended 8 AM - Dusk.
PILOT ALERTS!! ** Tall trees in vicinity of airport!!
RESTRICTIONS!! ** Airport is CLOSED to hot air balloons landing!!
** Airport is CLOSED to ultralight landings!!

CTAF/UNICOM	122.700

CAMP LAKE AIRPORT, CAMP LAKE

REMARKS- Attended Monday - Saturday 9 AM - 6 PM.
PILOT ALERTS!! ** Ultralight activity on and in vicinity of airport!!

CTAF	122.900

EAST TROY MUNI. AIRPORT, EAST TROY

REMARKS- Attended 8 AM - 5 PM.
PILOT ALERTS!! ** Tall trees in vicinity of airport!!
** Parachute Jumping/Skydiving in vicinity of airport!!
** Ultralight activity on and in vicinity of airport!!
** Noise abatement area!!

CTAF/UNICOM	122.800
Appr/Dep	125.350

ELROY MUNI. AIRPORT, ELROY

REMARKS- Unattended.
PILOT ALERTS!! ** Tall trees in vicinity of airport!!
** Tall bluffs and trees located on both sides of the runway!!

CTAF	122.900

FOND DU LAC COUNTY AIRPORT, FOND DU LAC

REMARKS- Attended 8 AM - Dusk!!
PILOT ALERTS!! ** Tall trees in vicinity of airport!!

CTAF/UNICOM	122.800	
FSS	122.500	
Appr/Dep	127.000	387.100

FORT ATKINSON MUNI. AIRPORT, FORT ATKINSON

REMARKS- Unattended.
PILOT ALERTS!! ** Tall trees in vicinity of airport!!
** Ultralight activity on and in vicinity of airport!!

CTAF	122.900
Madison appr/dep (6 AM-11 PM)	120.100
Chicago appr/dep (11 PM-6 AM)	133.300

CINDY GUNTLEY MEMORIAL AIRPORT, FRANKSVILLE

REMARKS- Attended Monday - Friday 8:30 AM - 6 PM, and Saturdays 11 AM - 6 PM.
PILOT ALERTS!! ** Tall trees in vicinity of airport!!

CTAF	122.900

HARTFORD MUNI. AIRPORT, HARTFORD

REMARKS- Attended 8 AM - Dusk.
PILOT ALERTS!! ** Tall trees in vicinity of airport!!
** Glider operations during Summer Months!!
** Runway 36 has a 78' Water Tower located 3885' from approach end!!
** Ultralight operations on and in vicinity of airport!!

CTAF/UNICOM	123.000	
Appr/Dep	124.750	307.000

ROCK COUNTY AIRPORT, JANESVILLE

REMARKS- Attended continuously.
PILOT ALERTS!! ** Tall trees in vicinity of airport!!

CTAF	118.800	
UNICOM	122.950	
ATIS	128.250	
FSS	122.100	
Appr/Dep	126.000	327.000
Tower (6 AM - 9 PM)	118.800	397.200
Ground	121.650	

DODGE COUNTY AIRPORT, JUNEAU

REMARKS- Attended during Daylight Hours.
PILOT ALERTS!! ** Irregular ultralight activity on and in vicinity of airport!!

CTAF/UNICOM	122.700	
Appr/Dep	133.300	380.350

(6 AM-11 PM, other times contact Chicago Center) 119.150, 396.000

TRI-COUNTY REGIONAL AIRPORT, LONE ROCK

REMARKS- Attended 6 AM - 5 PM.
PILOT ALERTS!! ** Tall trees in vicinity of airport!!

CTAF/UNICOM	123.000	
FSS	122.350	
Appr/Dep	133.300	380.350

AERO PARK AIRPORT, MENOMONEE FALLS

REMARKS- Attended during Daylight Hours.
PILOT ALERTS!! ** Tall trees in vicinity of airport!!
** Parachute Jumping/Skydiving in vicinity of airport!!
** Runways are NOT PLOWED during Winter Months, and open to ski aircraft only!!
** Ultralight activity on airport!!

CTAF	122.900

MOREY AIRPORT, MIDDLETON

REMARKS- Attended 8 AM - 5:30 PM.
PILOT ALERTS!! ** Tall trees in vicinity of airport!!

CTAF/UNICOM	123.000	
Appr/Dep	133.300	380.350
	124.000	396.000

VALHALLA AIRPORT, NORTH CAPE

REMARKS- Unattended.
PILOT ALERTS!! ** Tall trees in vicinity of airport!!

CTAF	122.900

PALMYRA MUNI. AIRPORT, PALMYRA

REMARKS- Unattended.
PILOT ALERTS!! ** Tall trees in vicinity of airport!!

CTAF	122.900

PORTAGE MUNI. AIRPORT, PORTAGE

REMARKS- Attended Monday - Saturday 6 AM - 1 AM, and Sundays 7 AM -7 PM.
PILOT ALERTS!! ** Tall trees in vicinity of airport!!
** Numerous deer on and in vicinity of airport!!
** Runway 35 has power lines and poles 115' above ground level!!

CTAF/UNICOM	122.700	
FSS	122.100	
Appr/Dep	133.300	380.350
	120.100	350.300
	124.000	396.000

COWGILL FIELD, RID

REMARKS- Unattended.
PILOT ALERTS!! ** Tall trees in vicinity of airport!!
** Runway is plowed intermittently during Winter Months!!

CTAF	122.900

FOX RIVER AIRPORT, ROCHESTER

REMARKS- Attended 8 AM - 4:30 PM.
PILOT ALERTS!! Tall trees in vicinity of airport!!

CTAF	122.900

SHEBOYGAN COUNTY MEMORIAL AIRPORT, SHEBOYGAN

REMARKS- Attended Monday - Friday 6 AM - Dusk, and Saturdays and Sundays from Dawn - Dusk.
PILOT ALERTS!! ** Tall trees in vicinity of airport!!
** Ultralight activity on and in vicinity of airport!!

CTAF/UNICOM	122.700	
FSS	122.100	
Appr/Dep	127.000	387.100

QUAMS MARINA SEAPLANE BASE, STOUGHTON

REMARKS- Attended April - October irregularly.

CTAF	122.900

SYLVANIA AIRPORT, STURTEVANT

REMARKS- Attended during Daylight Hours.
PILOT ALERTS!! ** Ultralight activity on airport!!
** Tall trees in vicinity of airport!!

CTAF/UNICOM	122.800

BIG FOOT AIRFIELD, WALWORTH

REMARKS- Unattended.
PILOT ALERTS!! ** Tall trees in vicinity of airport!!
** Parachute Jumping/Skydiving in vicinity of airport!!
** Runways are NOT PLOWED during Winter Months, open to ski equipped aircraft only during Winter Months!!

CTAF	122.900

WATERTOWN MUNI. AIRPORT, WATERTOWN

REMARKS- Attended 6 AM - 10 PM.
PILOT ALERTS!! ** Tall trees in vicinity of airport!!
** Ducks and seagulls occasionally near airport during seasonal migrations!!
** Deer on runways!!

AWOS-3	119.975	
CTAF/UNICOM	122.800	
Appr/Dep	133.300	380.350
	119.150	396.000

WAUNAKEE AIRPORT, WAUNAKEE

REMARKS- Unattended.

CTAF	122.900

GUTZMER'S TWIN OAKS AIRPORT, WHITEWATER

REMARKS- Unattended.

CTAF	122.900

WINFIELD AIRPORT, BRISTOL

PILOT ALERTS!! ** Parachute Jumping/Skydiving in area!!
NOTE: This is all the information I have. Could this be a private airfield? Readers, can you help me out on this?

LAKE DELTON PARACHUTE JUMPING/SKYDIVING AREA, LAKE DELTON

MATH-AIRE FIELD, MARSHALL
PILOT ALERTS!! ** Parachute Jumping/Skydiving in vicinity!!
NOTE: This is all the information I have, looking for help from readers!

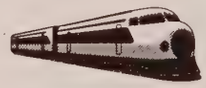
VINCENT AIRPORT, GENOA CITY

REMARKS- Unattended.
PILOT ALERTS!! ** Tall trees in vicinity of airport!!
** Power lines and poles on and in vicinity of airport!!

CTAF/UNICOM	122.800

COMMERCIAL AIRLINE COMPANY FREQUENCIES

MISC. AIR FREQUENCIES, MILWAUKEE
CARGOAIRE WISCONSIN AVIATION SERVICES
UNICOM (helicopters) 122.950
SIGNATURE FLIGHT SUPPORT
UNICOM (helicopters) 122.950
CESSNA AIRCRAFT COMPANY
Search and Rescue 123.200
Flight tests 123.225
GRAN AIRE, INC.
Flight tests 123.000
ROCKWELL INTERNATIONAL
Flight tests 123.525
FLIGHT FOR LIFE HELICOPTER
Operations 129.275
UNITED AIRLINES
Operations 129.300
AMERICAN AIRLINES
Operations 129.325
UNITED PARCEL SERVICE
Operations 129.425
NORTHWEST AIRLINES
Dispatch 131.325
Operations 129.550
MIDWEST EXPRESS AIRLINES
Operations 132.000



By Land

RAILROADS

BURLINGTON NORTHERN

Statewide Repeater	KB85451	160.500
PBX	KB85451	160.545
PBX	KB85451	160.620
PBX	KB85451	160.665
PBX	KB85451	161.130
PBX	KB85451	161.565
Yard	KB85451	160.560
Yard	KB85451	160.650
Yard	KB85451	160.830
Yard	KB85451	161.010
Yard	KB85451	161.415
Yard	KB85451	161.505
Road	KB85451	161.100
Road	KB85451	161.160
Road	KB85451	161.415
Yard (hump)	KB85451	160.770
Shop	KB85451	160.590
Marine	KB85451	160.890

CHICAGO NORTHWESTERN RAILROAD AT MADISON

Road	KFZ654	160.455
Road	KFZ654	160.890
Road	KFZ654	161.040
Yard	KFZ654	161.175

CHICAGO NORTHWESTERN RAILROAD AT MILWAUKEE

Maintenance (road)	KFZ659	160.455
Police	KFZ659	160.485
Road	KFZ659	160.890
Road	KFZ659	161.040
Yard	KFZ659	161.430

SOO LINE RAILROAD AT MILWAUKEE

Road (also Amtrak)	WNWH410	160.770
Road	WNWH410	161.085
Road	WNWH410	161.370
Road	WNWH410	161.520
Yard	KJV806	161.430

WISCONSIN TROLLEY MUSEUM, EAST TROY

General operations	WNUZ464	463.6375/468.6375
General operations	WNUZ464	464.475/469.475

TRUCKING AT MILWAUKEE

Central Transport	KZZ714	44.06
Tandem Transport	KNIR489	44.22
Dispatch 10	WNXS906	452.775/457.775
Consolidated	KTZ482	159.495
Barry Trucking	KNEY801	159.915
Barry Trucking	KCK349	159.945

By Sea

AT MILWAUKEE:

South Shore Yacht Club	WQZ401	156.425 Comm/Rec
Milwaukee County Marina	WHG903	156.450 Comm/Rec
Milwaukee Yacht Club	KMC236	156.450 Comm/Rec
Paragon Fish Company	KCE318	156.450 Comm/Rec
Paragon Fish Company	KCE318	156.500 Comm
City of Milwaukee	WHX677	156.500 Comm
City of Milwaukee	KIL829	156.600 Comm
City of Milwaukee	KIL829	156.650 Navigation
Milwaukee Coast Guard Station Operations		165.3375

AIR MAIL

My first letter comes from the fine people at the Burke Lakefront Airport, Cleveland, Ohio. As it celebrates its Bicentennial, the City of Cleveland will be Recognizing Women in Aviation, by conducting a handicapped speed race on August 30th racing from Cincinnati to Columbus, and then to Cleveland arriving on "Media Day" for the opening of the Cleveland Air Show which takes place August 31, September 1st, and September 2th at the Burle Lakefront Airport in downtown Cleveland, Ohio. Major attractions at the air show will include: U.S. Navy Blue Angels; U.S. Army Golden Knights; the Red Barron Stearman Squadron (I believe these are Bi-planes); Sean Tucker Solo Aerobatics; Cleveland Aeromodeling Society; Civil Air Patrol; and the Metro Life Flight, who, working with the CAP, will put on a crash rescue demonstration, along with fly-bys and demonstrations by others of the U.S. Armed Forces. Some Blue Angel frequencies were listed in U.S. Scanner News last month.

U.S. Army Golden Knights

General operations: 32.30, 42.35, 123.425,123.475

Civil Air Patrol: Repeater: 148.150

Burke Lakefront Airport and Heliport

CTAF	124.300	
UNICOM	122.950	
ATIS	125.250	
Appr/Dep	125.350	360.600
Tower	124.300	319.800

Helicopter Unicom

123.050

I got another letter from Earl Welbur, Wellston, Ohio, who is good enough to send in frequencies for this column from time to time. Thanks Earl! This is what Earl monitors in Wellston, Ohio:

Airborne Express	128.850
Airborne Express	130.925
Airborne Express	131.975
Airborne Express	131.875
Delta Airlines	129.600
Delta Airlines	129.700
Delta Airlines	129.500
American West Airlines	131.500
Ohio Nat. Guard Helicopters	46.80

Norfolk Southern Railroad

PBX	160.275
Road	161.190

Great Miami and Scioto Railroad

General operations	160.905
Commercial Badge line of some kind	157.025
USCG at Louisville, Ky.	157.100
	156.800

Earl also would like to know the transmitter site locations in his area as well as in Mason County, West Virginia. Can any of the readers help Earl out? If so write to me: Roger West, P.O. Box 291, Amery, WI. 54001-0291 and I will pass the information on to Earl.

In Closing

I would like to thank everyone who wrote, as this is what makes the column *YOUR COLUMN!* Take care and send in your favorite frequencies. 73's, Roger

Credits:

Earl Wilbur of Wellston, Ohio
Burke Lakefront Airport, Cleveland, Ohio
VHF & UHF DOD Publications
Airport/Facility Directories
DOD Military Training Routes Publication
FCC Data Files
My data files
Happy Father's Day to Each of You!

USSN

The Other Half

"Freaknik," Computer Virus, What Next?

A Computer Virus Can be Funny . . . Sometimes.

by Janet Cravens

Seems like things have been pretty quiet around here on the southern front. Not too much activity to be writin' about, I reckon. We are, however, making big plans for the 1996 Olympic Games to be held here in Atlanta. We expect people from all over the world to attend—from other countries, nations, and territories. I must admit, though, I did not expect the visitor we had this week.

I have to tell you, God works in mysterious ways. I had been asleep on the bed taking a nap and was just waking up when I heard the dispatcher call for someone to go to a small white abandoned church where a young man, apparently inebriated, was on top of the church trying to remove the steeple. When the deputy from the sheriff's office got to the scene of the crime, the young man explained that had been talking to God and God said he could have the steeple on top of the church. So he drove 225 miles from his home down in south Georgia to get it. Now, I don't know about you, but I figure if God thinks I need a steeple, he ought to make one available pretty close to my house so I wouldn't have to go so far. Then again, I guess I'm not too sure why God would want *me* to have a steeple, let alone anyone else. But quite frankly, as God provided manna for the children of Israel in the wilderness, I would expect him to provide me a steeple if I had need of one.

I think there have been too many full moons this month. We had a report of feces falling from a balcony at an apartment complex here. The dispatcher sent a deputy to the apartment complex, but once the deputy got there he wasn't exactly sure what to do. Seems like there really aren't any laws on the books about what to do when feces falls from the sky, and since Chicken Little was long gone and couldn't tell the King the sky was falling, the deputy couldn't decide what to do. There was plenty of evidence on the ground that feces had indeed fallen, but there were no witnesses who saw anyone dropping it, no laws which could be established as broken, and the person who lived in the apartment on the second floor denied that it was his feces. The deputy just closed the case and went on. Even in Georgia, nobody disputes that at times the feces just has to hit the fan (or the sidewalk).

Atlanta is about to be bombarded with "Freaknik." For those of you who are unfamiliar with Freaknik, this is the weekend of spring break when college students from universities and colleges all over the nation flock to Atlanta to party hardy and have a good time. Two years ago, roads in Atlanta were shut down, parks were destroyed, young people were smoking pot, selling crack and drinking on the streets. There were so many people in the streets that even the emergency crews, paramedics, and ambulances could not get through. Last year, Bill Campbell, the mayor of Atlanta, announced that Freaknik was not welcome in Atlanta. This, of course, caused even more students to come, just to show that they had a right to be anywhere they wished. As a result, shopping malls were used as meeting places, stores were broken into and looted, and windows and doors were broken, while other merchants just closed up shop and went home before sundown when the action started to get wild. Girls were pulling off their clothes and dancing naked on the tops of cars. Of course, Mayor Campbell then explained that he didn't mean that the students weren't welcome, just that anyone who broke the law would be arrested. Several hundred people were arrested and the students behaved as immorally, indecently, and uncouth as possible.

So, this year, Freaknik is being used as a test period to see if the plans which have been made for the Olympics will work. This will give security a chance to see if their plans will function, while our rapid rail system, MARTA, determines if they will be able to meet the needs.

Roger has been doing a lot of research into the Olympics, therefore, I know a lot of things I don't think I'm supposed to. For example, the Olympic Village where most of the athletes will be staying has started to sink into the ground and is now leaning. One side of the complex is approximately eight to ten inches lower than the other side. The Atlanta Committee for The Olympic Games (ACOG) got together and tried to decide what to do to fix it, but when they remembered that this was supposed to make Atlanta a new international city, they decided this could be Georgia's example of the

Leaning Tower of Pisa.

I'm sure you've all heard the story of the person at ACOG who answered the phone one afternoon to hear a young man in New Mexico requesting tickets. She told him that they didn't sell tickets to persons from other countries, that he should contact the ticket outlet in his own country. He tried to explain that he lived in New Mexico and was trying to order from his own country. When he couldn't make her understand, he asked to speak to her supervisor. The supervisor, when the young man explained the problem, replied, "Old Mexico, New Mexico, it doesn't matter, you still need to call the ticket outlet in your own country." I understand that all personnel were required to name the 50 states before they get their next paycheck.

While Roger's been off doing research on the Olympics and everything else he could think of, the spider webs have grown enormously in our bedroom. The other day a friend of mine visited and while she was here remarked that she'd heard of people using fabric as a wall cover, but she'd never seen anyone use lace. She was very embarrassed when I told her it wasn't lace, it was a spider web.

You say, "Why do you have spider webs in the house"? Well, since my accident, I have not recovered the ability to raise my arms above my head and do any strenuous lifting. At this point in my recovery, I am able to pick up a five-pound bag of sugar or flour, but that is about all. I asked Roger four weekends ago to decide whether he wanted to clean them or if I needed to pay someone to come in and clean. He said he'd clean them, but so far, there's been too many other interesting things going on for him to waste time wiping spider webs. He did get pretty motivated last weekend but I didn't know why at the time.

Several weeks ago, we discovered a computer virus on one of the computers in my office. I called our electronic bulletin board system (BBS) (Southeast Signal Intelligence Group) which Roger runs on his computer at home in order to download the virus software which would clean the hard drive. (For those of you who are interested, the number is 770-942-1089). When I logged on, it asked if I was Janet Cravens of Douglasville, and I said yes. It asked me to verify my birth date, so I did. Then it asked for my home phone number. I put the number in and the computer said, "That is an incorrect phone number, please try again." I thought maybe Roger had changed the phone number in the BBS to the one on my computer in the living room. I entered that phone number and it said, "That is an incorrect phone number, please try again." I thought for a few minutes, then I tried our third phone number. I got a message which read, . . . "access denied! You have provided an incorrect phone number. Please leave a message to the SYSOP (system operator) to explain your problem."

I started leaving Roger a message which was to say, "Why don't you leave my phone number alone or at least let me know which one you're using, so I can do what I need to do." Halfway through leaving this message, Roger called me at work. I told him what I was trying to do and asked for his password so I could call home and do what I needed to do. I tried to abort the message I was leaving, but the computer would not let me. I tried to hang up without leaving the message and the computer told me I had to leave a message. Finally I just saved the incomplete message and logged off. I called back and got the file I needed and checked the hard drive on my computer for a virus.

A few days later, I needed a file at work that one of my employees (who had called in sick) had. Since I couldn't go after it and she couldn't bring it in, we decided she would upload it to the BBS, then I would call home, log on, and download it and then I would have it at the office. She called me to tell me the file had been uploaded and was ready to be downloaded. I called home, logged on (with all the right information), and then read a message that said "You have new personal mail waiting." I wondered who could have left me a message since I'm almost never on the board, so I said "Read personal mail now." The message came up from Roger Cravens to Janet Cravens. It repeated the message I had sent him from the week before which, in actuality, had never been finished, but which read, "Why don't you leave"? Roger's response to this was "leave what?"

I laughed until I cried. He had been so sweet and loving the weekend before. He'd helped me around the house, went to buy groceries and actually hung the laundry up in our closet when I got through with it. I wondered what happened to make him so sweet and loving all of a sudden, but decided I would just accept it and roll with the flow. Little did I know he thought he'd been given the warning light to pack his bags and move out of our house.

So, honey, this is for you. I love you too much to turn you loose on the world. You're mine forever, and then some, and as long as there are coffee filters in the house, you're welcome to stay and share them with me.

There you have it—all the insanity in the Cravens' household for the past few weeks. Unfortunately, just as soon as we get through one period of insanity, another period begins. Oh well, at least it ain't brain surgery, doesn't cost as much, or hurt as badly, and sometimes it even feels good! **USSN**

SURVEILLANCE
& COUNTERSURVEILLANCE Electronic Devices
Hidden Video Cameras • Electronic Kits • Voice Changers
Bug and Phone Tap Detectors • Shotgun Mics • Micro Recorders
• Vehicle Tracking • Locksmithing • AND MORE!
Extra Long Play Telephone Recorders - Silently Tapes Incoming/Outgoing Phone calls automatically... $125.00 and up
SPY OUTLET FOR CATALOG SEND $5.00 TO...P.O. Box 337, Buffalo, NY 14226 (716) 691-3476 - (716) 695-8660

800MHz coverage!
We have scanners with full 800MHz coverage!
Models Available Include:
AOR AR8000, AR3000A
ICOM R1, R100, R7100, R9000
Kenwood RZ-1 Standard CCR-708A
Yupiteru MVT7100, MVT7000, MVT8000
ATLANTIC HAM RADIO LTD.
(416) 636-3636 368 Wilson Ave
(416) 631-0747 (fax) Downsview, ON
All U.S. orders shipped UPS Air Canada M3H 1S9

COMPUTERS

Radio Manager Version 3.0 Beta

A Shareware Program for Controlling a Number of Popular Radios.

by Lonnie Gorsline

Radio Manager is one of many good programs that are shareware. But don't let the "shareware" title scare you away. Sometimes this is the only way some hobbyists can afford programs for their computers. Not only that, but most of the shareware out there is really good these days.

Radio Manager runs in Windows 3.1 or higher and will take up a little more than 2 Meg of disk space. You will be able to control most Icom receivers, the AOR AR8000, AR2700, and the Optoelectronics OS456/OS535-equipped Radio Shack Scanners. This version also has the capability of interfacing the Optoelectronics Scout. You are able to download frequencies from the Scout into a bank of your choosing. (Fig. 1).

Getting the program up and running was easy. All you need to do is copy the program from the disk into an empty directory and run the program called RM.EXE. After that, just answer the questions and that's all there is to it.

The main screen is laid out very well, with most of the operational controls on the top (Fig.2). The Manual, Scan, and Search controls are right there next to each other for easy access. The Up and Down arrows next to them control which direction you would like to scan or search. The circle with the arrow on the end takes you to either the beginning or end of the scan bank or search range. Next to that you will see a box that is titled "Signal." It will light up to tell you that there is a signal present, along with a meter that gives you an idea of how strong the signal is. You have your choice of a bar-type meter or one that imitates a meter with a needle.

Continuing across the top of the screen, next to the meter is a button labeled WX. This is a very handy feature to instantly tune in the weather frequency in your area. You can also change this button so it will tune in your favorite frequency and label it as such. The next button will mute or unmute your speaker, and the last two will start and stop a tape recorder.

The next part of the screen shows the active frequency and mode. If you look at Figure Two you will see two sets of up and down arrows next to the frequency. These permit you to change the frequency up or down, in either kHz or MHz, depending on what your step size is. What's really nice about this feature is that you can even go up or down in frequency from a memory channel. This would be the equivalent to the Direct button used on the scanner itself. Once you have gone up or down in frequency you need to press the Enter button on the screen in order for the program to tune the radio. "Lookup" is supposed to be used to see the recent information about the currently displayed frequency from File Manager. But for some reason this did not work. I wouldn't be too concerned about this however, since this is only a early beta version and there are still things to be worked out.

Next we see the current Bank and Channel number of the current frequency. You can change the current Bank and Channel by pressing the arrow keys with the mouse pointer. The Channel can be locked out and a Delay can be set by checking the appropriate boxes to the right of the channel number.

In the area below, the program shows us what the Class and Service of the active frequency is. Note that when you are entering your frequency information, the Class is a required field.

Another nice thing I like about the program is when you hold your mouse pointer over a button or area for a moment, the program will display text

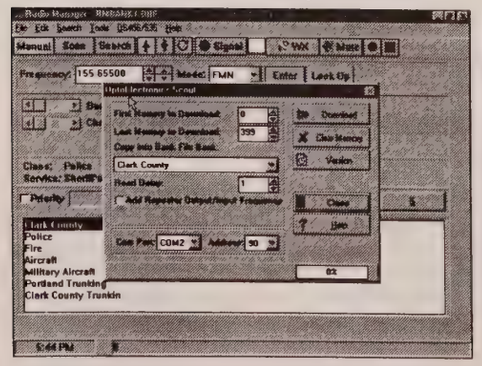


Figure 1

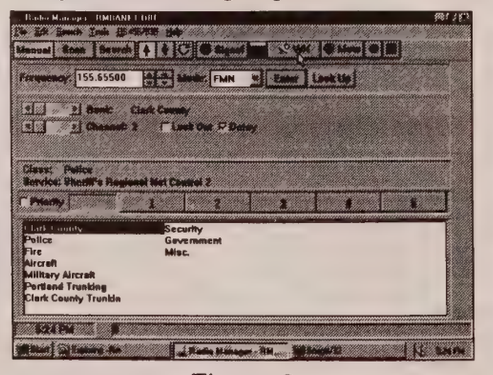


Figure 2

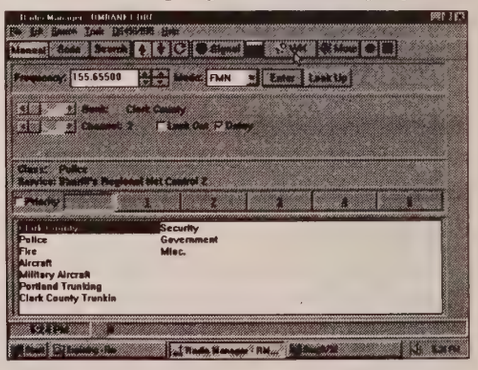


Figure 3

telling about that particular button.

We now come to the Priority and Bank information area. If the Priority box is checked, it will enable the Priority function. The box to its right is the currently active priority channels. To the right of that are the five priority channels that you can instantly have Radio Manager tune to. All of the information on these buttons can be changed by right clicking on the button. Below this area shows the Banks we have in the file that we have loaded. The banks are activated by clicking on the bank name. It will then become highlighted. The same is true to deactivate a bank. Just click on the highlighted bank and it becomes inactive. This way, you can see at an instant which banks are active and which are not.

At the very bottom of the screen there is a clock and to its right, a window displaying a number of different parameters, depending on how you have the program set up. These can be the scanning speed, PL tone, DCS tone, and DTMF tones. Unfortunately the PL, DCS, and DTMF tones are not displayed at the time they are transmitted. You have to go into the OS456/535 menu and select the program to read the information from the board.

Like any other scanning program, you need to enter in your frequency information. You do this by first setting up your banks. You can set it up so that it's arranged like your scanner, or you can customize it the way you want. For those of you lucky enough to have a radio from which you can up and download, you will want to set it up just like your radio. But since I'm using the Optoelectronics OS-535 board, I don't have that capability.

Setting up the banks is easy and straight-forward. There are actually two ways of inputting your data. The first one is by editing the Bank File. This will let you actually add, delete, and change anything related to a specific channel in a bank (Fig. 3). The second one, which is preferred by the author, is the Channel Modification of the program (Fig. 4). I found it much easier to add frequency information using the Bank File modification program, but that is my own personal preference.

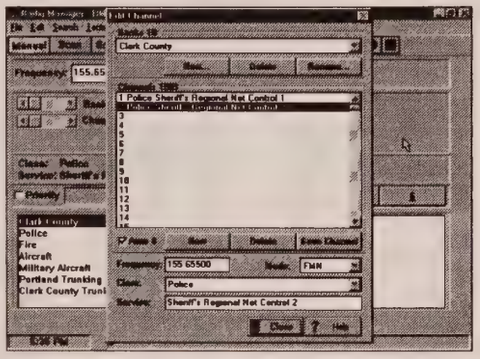


Figure 4

Under the Options menu you are able to adjust a lot of the different features of the program. As you can see in Figures 5 through 11 you can change everything, from what you want as your special frequency (in case you don't want a weather channel) to how many channels you want in each bank. I thought this was a real handy way to manage all of the configuration information needed.

One of the programs that is sort of a companion program to Radio Manager is Frequency Manager. Frequency Manager is a program to manage your frequencies, of course. Basically, besides frequencies, it will also store other, related information about your channels, such as a call signs. You can even enter your frequency information and then load it into Radio Manager. Radio Manager can then write to that file, with additional information, including when the frequency was last monitored.

This isn't a bad program. I can see some improvements that could be done. I would like to see the program be able to display the PL, DCS, and DTMF tones as they are being transmitted, instead of having to return after the fact to find out what they were. Scanning speed was the slowest of all of the programs I've tested. Using the speed feature that was included in the program, it only showed a rate of about fifteen channels per second. The stock speed of a Radio Shack Pro-2035 is fifty channels per second. Slowing down to fifteen is quite a difference. I'm not sure what the scanning speeds are on some of the other scanners that can use this program, but I think that this program would also slow them down. I also found entering frequency information was awkward and I found myself having to redo it several times to get it right. For instance, you can change the names of the banks. When you are done you select Close on the window. I would expect a notice asking you if you want to save the information, but there isn't one! I found out by trial and error that when you close the window you need to go under the File menu on the main screen and do a Save. Then, in order for it to actually take place, you need to reload it into the program. A lot of these problems are probably due to the fact that this is a beta version. So take all of this with a grain of salt, it could all be different in the final version.

I did find, however, good things about the program. I liked the way the screen is organized. The ability to be able to tune up or down from a memory channel is great. I think the instant weather channel is a great idea, and the fact that you can change it to any frequency you want is an added bonus. The status of the

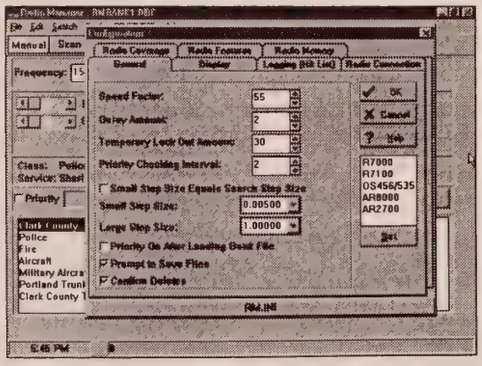


Figure 5

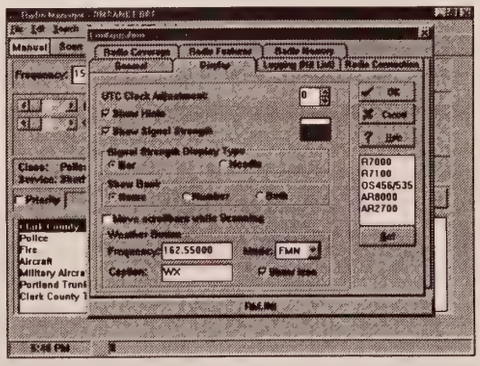


Figure 6

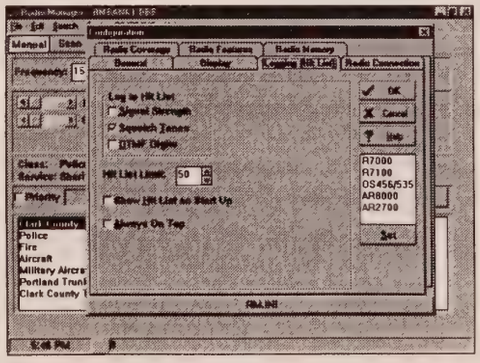


Figure 7

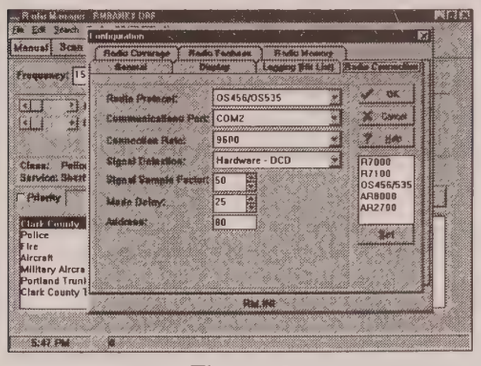


Figure 8

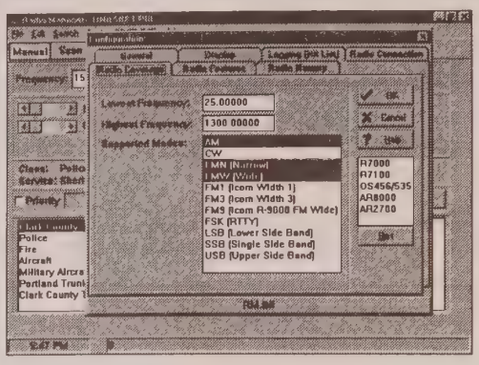


Figure 9

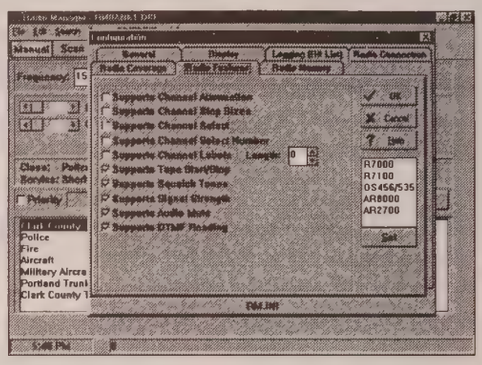


Figure 10

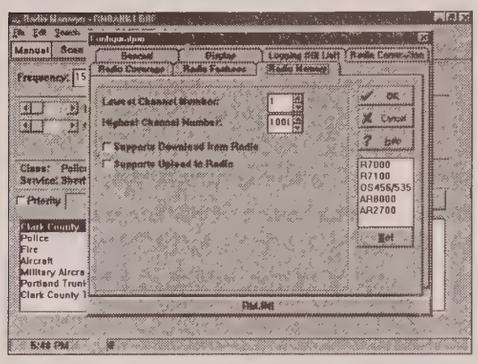


Figure 11

banks is another good area. You can see at any time what banks are active and which ones aren't.

I think Ben Saladino has a good program working here. Especially since it is shareware. You're not going to be putting out a lot of money. There has been no set price yet but expect it to be between $30.00 and $50.00.

I rate the program at 2 out of 4 stars.

You can find out more about Ben's software by contacting him in one of the following ways:
Ben Saladino, 660 West Oak Street,
Hurst, Texas 76053-5526
Web Page:
http://ourworld.compuserve.com/homepages/ben_saladino/
Email Address:
71052.2416@compuserve.com **USSN**

THE COMPLETE GUIDE TO
MILITARY MONITORING

NEW BOOK covers all phases of Military Monitoring. Military Frequencies All Services, U.S. Military Bases, Military Black Projects. Major Air Force Installations, Monitoring Equipment and Systems, Navy/Coast Guard and more.

$19.95 plus $4 Priority Mail ($23.95 total).
UNIVERSAL ELECTRONICS, INC.
4555 Groves Road, Suite 12
Columbus, OH 43232 (614) 866-4605

CHEEK

The King of Scanners takes this step-by-step, richly illustrated, bench manual far beyond everything ever published on scanner mods. Bill is a perfectionist who will help you convert your scanner into precisely what you've always wanted!

This comprehensive book even includes complete schematics, plans, parts lists, sources, assembly instructions, and test procedures to help you build your own computer interface!

There's expanded memory, cellular, DTS, SCA, and much, much more, and for many scanners.

The most eagerly-awaited book in the history of scanning, and worth every second of the wait!

May 1995, 244 pages, large format, $29.95

EMERGENCY RADIO!
Scanning News As It Happens
Norm Schrein *President, Bearcat Radio Club*
214 pages, $14.95

"Irresistible" *Bill Cheek*
"Excellent" *Barry Goldwater*
"A winner... *911 Magazine*
"Outstanding!" *Henry Eisenson*
"Rates a 10!" *Dispatch Magazine*

SCANNERS
& Secret Frequencies
Henry Eisenson
320 pages, $19.95

"You can't miss!" *ASG*
"Must reading." *Electronics Now*
"Useful, knowledgeable..." *PopComm*
"Absolutely the best..." *Norm Schrein*
"A giant undertaking...authoritative" *Monitoring Times*

INDEX Publishing Group, Inc.
3368 Governor Drive, Suite 273SN
San Diego, CA 92122

First book $4 s/h, $2 ea add'l.
CA add 7.75% tax
MO/check via mail, or call.
Credit cards: 800-546-6707

The Scanner Man

Old Time Scanners and Crystals

A collection of hints, tips and helpful ideas for the scanner enthusiast. Send your useful hints, suggestions and general-interest questions to: The Scanner Man, USSN, P.O. Box 14923, Portland, Or., 97293-0923.

by the USSN Staff

There have been a couple of articles in some of the scanner-club newsletters and other mags lately relating to old-time, crystal-controlled scanners. Many long-time monitoring enthusiasts remember back to the days when your typical scanner had only eight or ten channels, with each channel requiring a crystal, tuned to the frequency you wanted to receive. Back then, a crystal would set you back five dollars or so, although if you were in the business, or knew someone who was, you could probably get them for as little as two bucks.

A lot of folks have realized that if you want a second scanner to monitor the PD and Fire in your basement workshop, you don't need a fancy programmable scanner. But those of us wanting to resurrect that old Bearcat 12 or Regency ACT-E16 sitting in the attic and set it up with new frequencies are finding that crystals for these old scanners are hard to come by. Nowadays, programmable scanners have replaced the crystal-controlled variety and the market for crystals has nearly disappeared.

We've done a little research and came up with the names and addresses of some of the companies that are still around.

Crystals

Two of the top independent manufacturers of crystals for the consumer market are both in Ft. Myers, Florida. I've bought many a crystal from Jan Crystals, mainly CR-32 and other mil-types for my "collection" of VHF and UHF military radios now crowding my basement. They still sell scanner crystals, only they now cost $10 each (including aircraft band crystals). Tolerance is .001%. They have a $20 minimum charge and the only quantity discount would be for a number of crystals with the same frequency. Their phone number is 1-800-526-9825 (1-800-JAN-XTAL).

Crystek, also in Ft. Myers, is a strange outfit to deal with. It's hard to get any information out of them and every time I've tried, I usually just wind up going elsewhere. They charge $8.50 for scanner crystals with a $15.00 minimum. They didn't know what the tolerance is! (An old catalog shows .0025% for VHF, .001 for UHF.) That's another problem you'll encounter. *Every* time I've called them and asked for their catalog, I've been told that they are out of them. They'll take my name and address, but the catalog still never comes. The last one I have is for 1990. Their number is 1-800-237-3061.

My favorite outfit for twenty years has been Monitor Crystal Service (Box 237, Watseka, Il. 60970). As far as I know, all they did was scanner and CB crystals, and they were cheaper than anyone else. (MCS also distributed scanners and CB's wholesale to dealers.) They are still in the scanner crystal business and retail them for seven bucks a pop. Three to nine run $6 each and ten or more cost $5 each. Back in the old days, they charged a dollar extra for "non-standard" crystals, such as Business or any service other than Police or Fire. They don't charge extra for these anymore, but you won't get aircraft crystals for this price. I never seemed to get any more bum crystals from them than anyone else so I can't fault their quality. But then, it's been years since I've ordered from them. Their number is 1-800-435-1855.

Bomar was a big name, way back when. They, too, are still around, but, as they told me, they rarely get calls for scanner crystals anymore. They charge $10 a crystal, but because of the limited demand, they ask for a $50 minimum. Their number is 1-800-526-3935. Their address is: 201 Blackford Ave., Middlesex, N.J. 08846.

Sentry manufactures crystals for about every application, including scanners. They charge $9.50 each. These are .002% tolerance. Their number is 1-405-224-6780. (Their 800 number is for dealers only.) Their address is: Box 250, 1201 Crystal Park, Chickasha, Ok. 73018. Like some of the other manufacturers, if

you order 16 or more of the same frequency, the price drops to $9.00, but who the hell is going to buy 16 or more of the same frequency? Not even a dealer, anymore!

International Crystal, Box 26330, Oklahoma City, Ok. 73126, has been around forever. They charge $13.45 a pop for .001% tolerance crystals, with a three week lead time. (This is typical of most of these companies. I doubt that even MCS stocks an inventory of crystals anymore, even the more popular police and fire frequencies.) International's number is 1-800-725-1426. You may want to call and get their catalog. They used to sell a lot of neat stuff for the experimenter.

Finally, there is Cal Crystal Lab, in Anaheim, California. They charge $10 each for scanner crystals, $9.50 for ten or more—again, of the same frequency. They are .001% tolerance. Their number is 1-800-333-XTAL.

The Bottom Line

As you can see, "rocks" no longer come cheaply! Temper reason with emotion when you spot that old Regency scanner on the table at the swap meet. If it is crystalled for old frequencies that the PD vacated ten years ago, you're going to be out a wad of cash before it emits anything but noise.

Nostalgia is one thing and many of these older crystal-controlled scanners had great sensitivity and the good audio quality (missing in most of today's models, it seems). But many also suffered tremendously from intermodulation interference and most experienced reverse-image problems. Not many of us want to listen to aircraft all through the VHF High Band. I've got quite a "museum" of old scanners sitting in my basement, but I wouldn't spend a lot of money getting any of them running. Like someone once said, "nostalgia ain't what it used to be!"

USSN

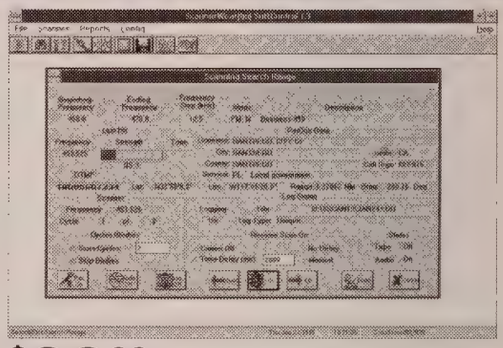
Quality Microwave TV Systems
WIRELESS CABLE - ITFS - MMDS
ATV - INTERNATIONAL - S-BAND
Amplifiers • Antennas • Books • Components
Filters • Systems • Video Products
• RF Frequency 1990 - 2700 MHz
• Cable Ready - VHF - UHF Outputs
• SASE For "FREE" Catalog or Send $1
PHILLIPS-TECH ELECTRONICS
PO Box 8533 • Scottsdale, AZ 85252
CHALLENGER SYSTEM 33-Channel 52dB+ Gain Complete Grid $265 Five Year Warranty FREE SHIPPING
ORDER LINE 800-880-MMDS
CATALOG / INFO 602-947-7700
FAX LINE 602-947-7799
Visa • M/C • Amx • Disc • COD's • Qty Pricing

C. CRANE COMPANY
COMMUNICATION
Shortwave ● Scanners ● Antennas
SANGEAN, GRUNDIG, DRAKE, UNIDEN, AOR
The most powerfull loop antennas for Shortwave/MW and much more!
International shipping
558-10TH ST. FORTUNA CA 95540
Free Catalog FAX 707-725-9060
800 - 522 - (TUNE) 8863

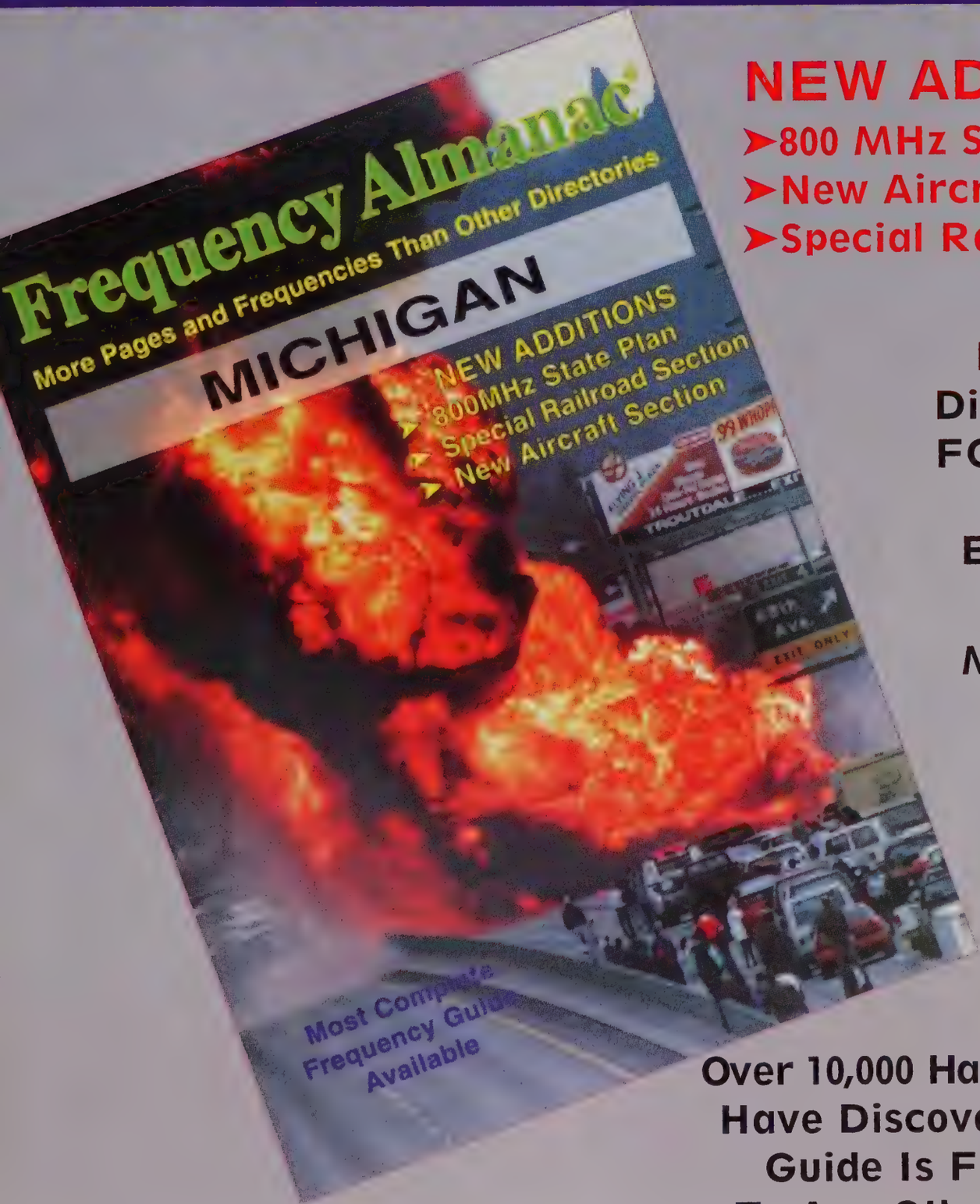
GMRS Radios
& Accessories
Maxon GMRS-210+3 10 ch. 2-5 watt portable Two-Way Radio. This is the ideal radio for React & GMRS repeater use.
NOW Only
$178.95
We stock all the Maxon accessories for this radio, plus Maxon and Yaesu base and mobile radios to 40 watts!! Best prices-Best accessories-Best shipping rates!!
NOW!!!
View our products on the INTERNET @
http://www.gmrs.comm
Order directly from the internet or call:
800-573-2256
Business hours: 9 am to 5 pm Pacific (Mon.-Fri.)
S-COMM
P.O. Box 36, Scotts Mills, OR 97375
fax: (503) 873-2051

CRYSTAL CONTROLLED
SURVEILLANCE
VHF & UHF PROFESSIONAL ENCASED PARTIALLY ASSEMBLED TRANSMITTER KITS
Countersurveillance. Also Tunable 70 to 305 MHz Kits. We Design & Manufacture Our Equipment. Custom Design.
FOR CATALOG SEND $2.00 TO:
SHEFFIELD ELECTRONICS CO., P.O. Box 377940-J
Chicago, IL 60637-7940. Tel (312) 324-2196

CATCH ALL THE ACTION
FIRESTIK SCANNER AND CB ANTENNAS FOR YOUR COMPLETE MONITORING AND COMMUNICATIONS NEEDS.
MOBILE ACTION SCAN ★ BASE ACTION SCAN
for auto for home
25 MHz TO 1200 MHz COVERAGE WITH SPECIAL TRAPS FOR BETTER PERFORMANCE IN THE ACTION-PACKED 140-170 MHz BAND.
Firestik / Firestik II CB antennas
THE MOST POPULAR WIRE WOUND CB ANTENNAS FOR QUALITY COMMUNICATIONS
For a FREE catalog write to:
Firestik Action Antennas
2614 E Adams St
Phoenix, AZ 85034
or call 602-273-7151

WINDOWS™ Control for Scanners
ScannerWEAR™ SoftControl 1.4
NOW SUPPORTS:
• OptoScan 456/535
• AOR 3000/3000A/8000
ICOM R7000/R7100/R9000
• Memory banks include 100 channels per bank with frequency, description and mode.
• Search ranges include frequency, step, mode and description.
• Data logging to the file includes date and time stamp, signal strength, tone and number of hits, location (requires PerCon Database).
• Spectra analysis in real time.
• CTCSS & DCS controlled scanning.
OPTOSCAN 456/535 now in stock for $289
ScannerWEAR™ SoftControl STD Windows control for all your basic scanning needs. $39.00 Plus tax & shipping

$99.00 Plus tax & shipping
R•C•S•I
Radio Control Systems, Inc.
CALL (800) 560-7234
Tech Support (619) 560-7008; 10am-4:30pm PST
Fax (619) 292-6955 International E-Mail rcsi@cts.com
World Wide Web http://www.cts.com/browse/rcsi
VISA, MasterCard, UPS COD
All trademarks the property of their respective owners.

FREQUENCY ALMANAC©



NEW ADDITIONS:

- ➤800 MHz State Plan
- ➤New Aircraft Section
- ➤Special Railroad Section

Frequencies Direct From the FCC Data Files Sent To Us Every Month.

Most Complete Frequency Directory Available.

Over 10,000 Happy Customers Have Discovered Why Our Guide Is Far Superior To Any Other. Order One Now And See For Yourself.

Latest States Updated:

St.	Pgs	Price	
Alaska	98	$19.95	$3.95 4th class, $5.95 PRIORITY MAIL
Arizona	189*	$19.95	$3.95 4th class, $5.95 PRIORITY MAIL
Hawaii	61*	$9.95	$3.95 4th class, $5.95 PRIORITY MAIL
Michigan	420	$24.95	$3.95 4th class, $6.95 PRIORITY MAIL
Washington	250*	$24.95	$3.95 4th class, $5.95 PRIORITY MAIL
Wisconsin	298	$24.95	$3.95 4th class, $6.95 PRIORITY MAIL

*Estimate

US SCANNER PUBLICATIONS
PO BOX 14923
PORTLAND OR 97214
1-800-890-6999

DISCOVER MasterCard VISA

MORE THAN A MAP

USE YOUR CREDIT CARD

1-800-890-7992
FAX (503) 233-5176

SEE FOR YOURSELF

$19.95+$3.95 S&H

DISCOVER
MasterCard
VISA

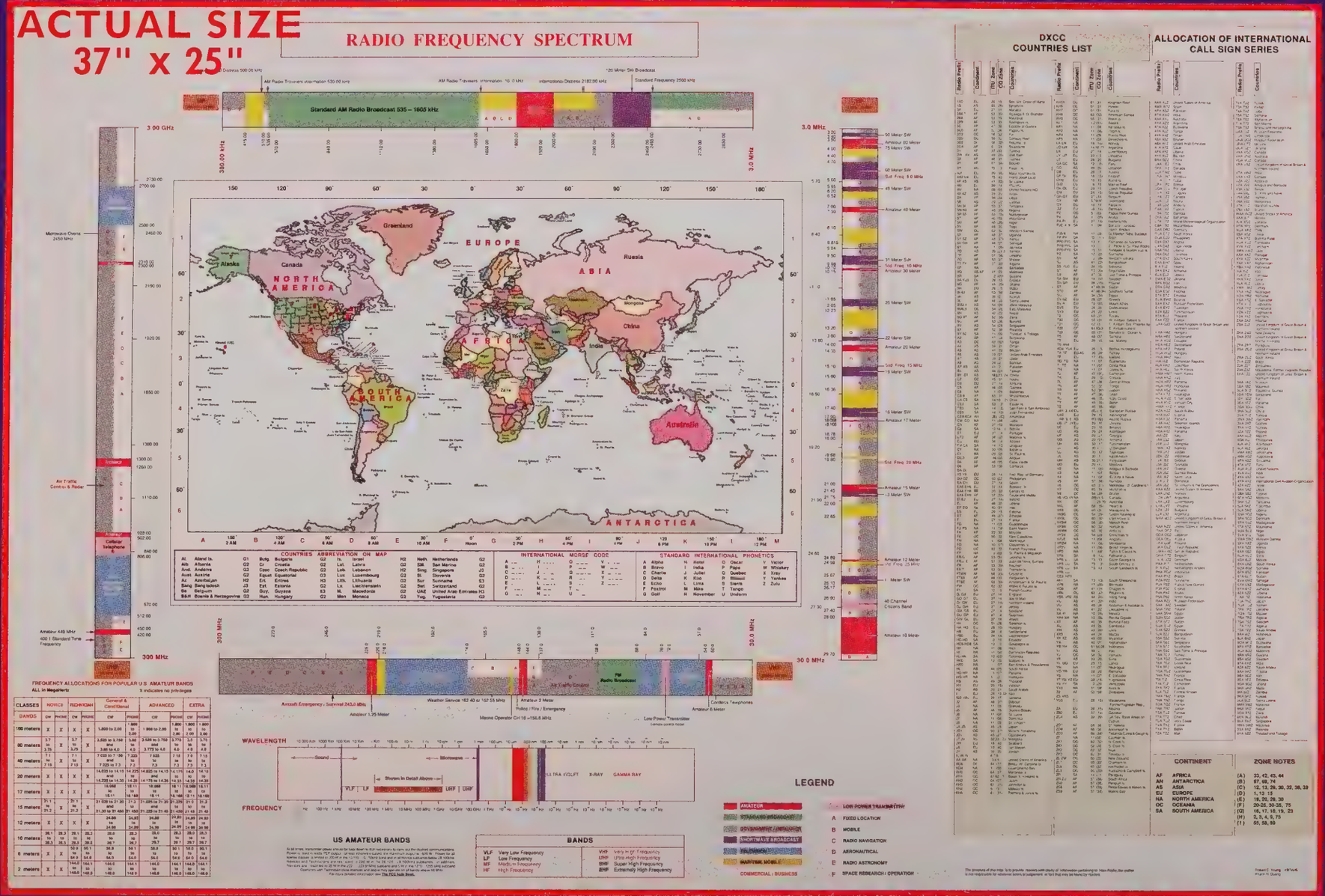
NEW STANDARD IN MAPS

SHIPPED ROLLED IN TUBE

ALL THE INFORMATION YOU WILL EVER NEED!!

STUNNING FULL COLOR POSTER ON 110LB PAPER

ACTUAL SIZE
37" x 25"



DEALER INQUIRIES WELCOME

US SCANNER PUBLICATIONS, PO BOX 14923, PORTLAND OR 97214

INTERNATIONAL SALES WELCOME

UNITED STATES FREQUENCY ALLOCATIONS

THE RADIO SPECTRUM

RADIO SERVICES COLOR LEGEND

ACTIVITY CODE

ALLOCATION USAGE DESIGNATION

U.S. DEPARTMENT OF COMMERCE
National Telecommunications and Information Administration

THE ELECTROMAGNETIC SPECTRUM

US SCANNER PUBLICATIONS
PO BOX 14923
PORTLAND OR 97214–4923
(503) 230–6999 FAX (503) 233–5176
1–800–890–6999

United States Frequency Allocations
50"X32" Full Color Wall Chart
Covers 3KHz to 300GHz

Printed By US Dept. Of Commerce, National Telecommunications and Information Service, Office Of Spectrum Management. Shipped Folded 1st Class

$9.95
+ $2.00 S&H
Order by phone with credit card or send $11.95 check or money order.

EEB...The Nation's Largest Radio Outlet

SCANNER SPECIALS

AOR

AR2700	$399,95
AR8000	$599.95
AR3000A	$1029
SDU5000	$995.95
AR5000	$CALL

Bearcat

BCT7	$169.95
BC120XLT	$179.95
SC150Y/B	$169.95
BC220XLT	$224.95
BC890XLT	$229.95
BC3000XLT	$369.95
BC9000XLT	$369.95*

Radio Shack

PRO26	$339.95
PRO46	$179.95*
PRO60	$299.95
PRO2039	$229.95*
PRO2040	$219.95*
PRO2042	$429.95*

Looking for that HUGE discount? EEB carries many other, top quality scanners at a fraction of the original cost. Ask for our USED (90 day warranty), B-STOCK (Factory warranty), DEMO (Factory warranty), & Evalution (NEW) (90 day warranty), list. ALL Units have manuals and accessories. These are the deals you have been searching for!!!

CYBER SCAN AOR AR5000

The new AOR AR5000 is on it's way. At this writing details are sketchy. BUT, THE *Internet* is buzzing and here are some of the tentative specs.

•10KHz-2600MHz
•1000 memories •All mode AM/FMN/FMW/LSB/USB/CW •IF band width 3 to 200KHz (7 filters) •12VDC computer control 10.7 MHz IF output

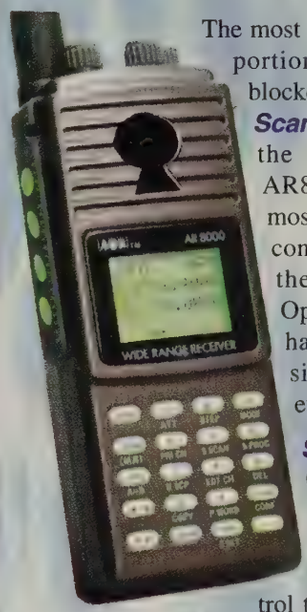
Watch our next ad for more detailed information
Price in the $2000 class

EXTRA!!! EXTRA!!!

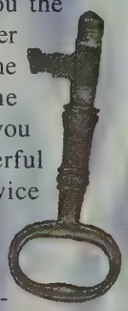
All new expanded 1996 Catalog. Hundreds of new items, you should have a copy by now...if not...get one!

- ***SW • Scanner • Amateur • Books • Comm/Govt.***

UNLOCK THE FULL POTENTIAL OF THE AR8000



The most popular AR8000 Scanner has a portion of it's frequency coverage blocked per FCC regulations. ***ScanCat Gold*** software will unlock the full potential of your AR8000, plus give you the most advanced computer control ever. Combine the AR8000 with the Opto Scout 40 and you have the most powerful signal intercept device ever conceived.



ScanCat GOLD
Can be used to restore full coverage of the AR8000. In addition to the AR8000 you can computer control the AR2700, AR3000A, Drake, Kenwood, Icom, Yaesu, JRC, Lowe 150, WJ HF1000 and Radio Shack Opto Scan. Details available.

OptoElectronics Scout 40
"Taking your scanner to a new dimension"
Will capture and record 400 frequencies up to 255 hits 10Mhz-1.4Ghz. & will Reaction Tune the AR8000 to any near signal the instant someone pushes the mic button. Also will reaction tune Icom, AR2700, OptoScan. Check out the details, See the Opto ad this issue for more details.

(Optional DB32 antenna shown.)

AR8000	Cell Blocked	$599.95
AR8000INF	RS232 interface	$84.95
ScanCat GOLD	w/free freq. disc till Dec 31	$94.95
Scout 40	10MHz-1.4Ghz list $449	$399.95
CBRT	Interconnect cable	$20.00
SCMOD	Scout Modification	$50.00
DB-32	Optional stub flex ant.	$29.95

EEB Package Deal...SAVE over $100.00

(A) AR8000/Scout 40/CBRT cable/EEB Mod/System check out & ext. 1 yr. warranty **$1039**
(B) Same as (A) plus ScanCat GOLD software w/ freq. disc till Dec 31./AR8000INF **$1299**
(C) Have an AR8000 now? Send it to EEB and you'll get package (A) for **$449** or (B) for **$599** Less extended warranty. You get 1yr. warranty on work done by EEB.

EEB does not advocate anyone listening to cellular calls.

EEB
323 Mill St.
Vienna, VA. 22180
FAX: 703-938 3350

Orders: 800 368 3270
INFO/Metro: 703-938 3350
BBS: 703 938 3781
Internet: eeb@access.digex.net
WWW: www.access.digex.net/~eeb/eeb.html

- We'll match anyone's deal
- Prices subject to change
- Prices do not include freight
- Returns subject to 20% restock fee
- Sorry no COD's

INTERNET

Law Enforcement on the World Wide Web

Police Are Now Using the World Wide Web to Interact With the People They Serve.

by Steve Baker

Law enforcement agencies have discovered a new tool to use in their fight against crime—communication. I am not talking about a new radio, or a better antenna. It's called the Internet and it is becoming an effective means for police departments to provide detailed information to the communities that they serve. Television shows like America's Most Wanted have shown how the general public can be a terrific assistance to the police when it comes to bringing fugitives to justice. These programs advocate that the community become aware of criminals, providing 1-800 lines that they can discreetly phone to report the whereabouts of a fugitive. Local law enforcement agencies across the nation are using the same techniques, utilizing the concerned public to help stop crime in their neighborhoods. Local and national programs such as Neighborhood watches, CrimeStoppers and Silent Witness are becoming popular tools for today's law enforcement agencies.

The Internet has become an effective means of interacting with the public and police agencies across the nation have taken advantage of it. The technology is new and more people are getting online every day. This month we will take a look at some of the best law enforcement world wide web pages available on the Internet.

These pages work best when you are viewing them with the latest version of Netscape (WWW.NETSCAPE.COM). You can download this application for free from their website. America Online users will soon have Netscape integrated with the free software, but the AOL browser now in use will work fine until then.

The Dallas, Texas Police Department consists of 2,788 officers, covering 378.40 square miles containing 1,023,400 people. In 1994, they answered 1,609,822 calls while maintaining a 29.5% clearance rate on crimes.

The Dallas Police Department WWW page (www.airmail.net/dpd) receives about one-hundred hits a day. It features detailed statistics about crime and police coverage—giving the public a detailed and accurate explanation of where their tax dollars are going. This advanced site features colorful graphics, press releases, community bulletins, job information and budget data. It also provides photographs and reports of fugitive criminals. The Dallas Police Department Web Page also features a listing of frequencies, signal codes and communication codes.

Here are Some of the Frequencies that Dallas Hobbyists Can Monitor:

Freq	Channel	Description
460.325	01	Central Patrol
460.375	02	Northeast Patrol
460.500	03	Southeast Patrol
460.425	04	Southwest Patrol
460.075	05	Northwest Patrol
460.175	06	North Central Patrol
460.275	07	Traffic Division
460.125	08	Tactical Division
460.025	09	Info
460.225	10	Car-to-Car
460.475	11	Investigative Units
460.400	12	Sec / Spec Events

In Irvine, California, the motto of the police department is, "In Partnership with the Community." They live up to this statement with the operation of the Irvine Police Department WWW page (WWW.IRVINEPD.ORG)

This page is updated continuously, focusing on the crime events that may affect the citizens of Irvine. Residential and commercial crime alerts are presented here, along with a description of the crime and tips for avoiding the situation. For example, one of the residential reports states that Irvine is currently being plagued by a group of burglars using lock picks to open front doors. This organized group is working in broad daylight, knocking on doors furiously until someone answers. When someone does, they try to pass themselves off as real estate agents. If no one is home, they pick the lock and rob the household. This WWW page also contains a description of the suspects, along with instructions on what to do if they visit you while you are at home. A photograph and crime resume of the most wanted fugitives in Irvine can also be accessed directly from the main page. Additionally, the Irvine PD page features a unique section called the Traffic Files. In it, the police profile some of the worst traffic incidents to occur in the Irvine area. They include photographs and reports of these incidents to warn people of the hazards on the road.

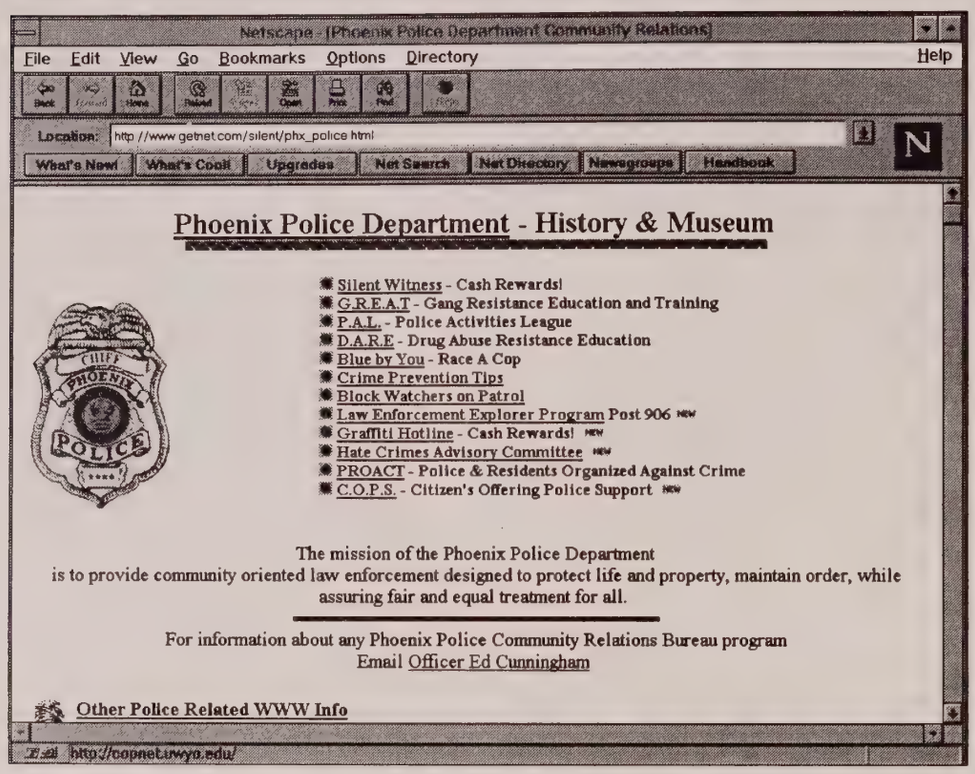
Here are some Irvine Police Department frequencies you can listen to: 45.580; 154.800; 154.920; 155.445; 155.505; 460.550; and 460.600.

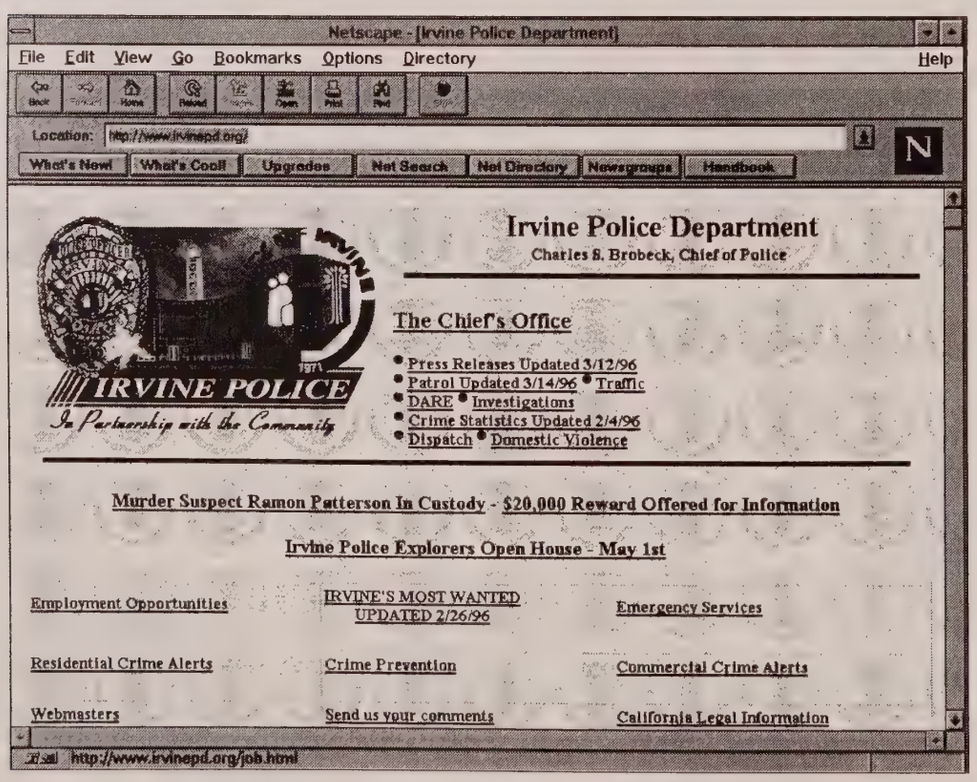
The Phoenix, Arizona police department (WWW.GETNET.COM/SILENT/PHXPOLICE.HTML) has several programs in place to involve the community. They also sponsor a Law Enforcement Explorer Program and offer various cash awards to citizens who phone in tips.

Here are a few Phoenix Police Department frequencies to get you started: 154.755; 154.890; 155.070; 155.370; 155.430; 155.520; 155.610; and 155.640.

What's New on the Net: If you are interested in seeing other law enforcement related web pages, check these out: WWW.STPT.USF.EDU/%EGREEK/POLICE.HTML WWW.IH2000.NET/IRA/IRA.HTML They contain links to practically every law enforcement agency in the country, plus some in other parts of the world. You can also get information on the various government law enforcement agencies. For additional Dallas—Fort Worth frequencies, try: WWW.SINEWAVE.COM/CHELSEA. This page has recently been updated to include military frequencies and Texas DPS frequencies for the entire state. KC5KTO's Radio Page contains tons of updated scanning information, including a state-by-state frequency list: WWW.CS.NMSU.EDU/~THHAREL/SCANNER/SCANNER.HTML

Notice that this month I listed my e-mail address (access@phoenix.net). Feel free to send me questions, comments, frequencies, new URL's or anything else. I would love to hear about any topics you would like to see covered in the future. **USSN**





Typical Web Sites

OPTO SCANNERS!
New
PROBE V2.0
Introducing...SmartScan™. *New technology follows the action!* Works exclusively with OptoScan 456/535. **For the serious scanning enthusiast!** Over 70 new features and enhancements. Expanded and improved frequency management. Up to 37% faster scanning speed (CPU dependent). None faster! Still easiest to use. Superior CTCSS/DCS tone control. Imports PerCon Data. *Why tie up your primary computer when you can run Probe on older DOS computers?* Featured in **PopCom**-9/95. Reg. $129.95. **Special pricing until May 15, 1996 - $99.95 + $7.95 S/H.** MC/VISA/Check/M.O. Write for more details. **DataFile@GEnie.com**
DataFile, Inc., P.O. Box 20111, St. Louis, MO 63123

BEGINNERS

Wired For Sound

There Are Always New Frequencies to Find!

by Laura Quarantiello

If you know me, you know it doesn't take much to get me thinking. I soak up ideas, bits of intelligence from all quarters, mull them over, keep or discard them. Nothing is too fantastic. If you're talking, I'll listen. Sail off on a tangent, I'll follow you. I love to be challenged by the ideas of others. Give me a piece of your mind and I'm one of the few who will willingly take it.

Like other human beings, I occasionally disagree. And when I do, it sets me off on a quest to find an intelligent rebuttal. I don't always succeed, and sometimes I discover that my disagreement was misplaced, but the search is half the fun anyway, right?

The other day I overheard a comment which really got me thinking. It went something like this: "Once you've monitored police, fire, emergency medical services, aircraft, ships and all the rest, what else is there? I mean, there's nothing new out there to hear. It's all the same after awhile." Well, that one rendered me speechless, just sent me right down for the count. I had no reply. Oh, sure, I could have come back with the usual answer, which is that every day is different, no two communications are the same, something's always happening, etcetera, etcetera.

But the truth is, I've been a scanner listener for going on fifteen years now and the things I listened to when I started out are basically the same things I'm listening to now. There are no new things under the sun. Or are there? I decided to find out.

I don't know what your scanning goal is, but mine is to be wired in to just about any communications going on in my city. If I see a guy with a radio on his hip, I want the satisfaction of being able to tune the frequency he's using. I want to be able to drive by a business and say, yeah, they use such-and-such a frequency. I want to be in the loop, wired for sound. I can't stand to be on the outside, wondering, I want to be in the know. If your goal is anything like mine, then you know that there are always new things under the sun to listen to. You can never get ahead of the game, never know all the frequencies being used in your area. You want me to prove it? Okay, you're on, let's see what we can find.

Marking Your Targets

If you think you're completely wired in to your local communications, try this test: Pick up your local telephone book, white pages or yellow, it doesn't matter. Now turn to any page. Pick a listing, a business or organization. I found one right away, Meadow Lake Country Club. They have a golf shop and a restaurant. Sounds like a place that would use radios. Do you know the frequency? Go ahead, check your frequency book. Is it there? If it is, you're in business, if not, you just found something new under the sun. It's as easy as that to find new scanning targets.

Whoever you are, new listener or old-hand, if you do some scanning planning, you'll never be bored with what's on the airwaves. It'll always be a new hunt.

It all starts with marking your targets. As I just demonstrated, the intelligence gathering tools are right there at your fingertips. The phone book and I are old friends and I've discovered many targets just by paging through the listings. Spend some time doing the same and see what you find. Pay special attention to the government pages. Agencies with little known and never advertised locations can often be found here. You may not realize that the District Attorney, for instance, has a satellite office in your city. Or maybe the National Guard has a local unit. These are all potential targets, ones that you may not have been aware of before.

Don't overlook the business pages, these are veritable gold mines. I just flipped two pages and found a concrete company advertising, "fast 2-way radio service." Hm, I don't think I've ever monitored them. And here's another one, a heating and air conditioning company with "24-hour radio dispatched service." Hey, take it as a personal challenge to hunt these frequencies down.

My second favorite resource is a well-worn Thomas Brothers map book. I like it because of its portability and ease of use, but in reality any good street map that shows landmarks will do the job. Study your map, looking for lakes, rivers, colleges, universities, shopping centers, parks, bus stations, railways, airports, beaches, military facilities, golf courses, sports arenas, stadiums, racetracks and anything else of prominence that you can find. These are all potential scanning targets. Cross-check them with a frequency

hybrid's like the *SCOUT*, you can put it to good use by carrying it wherever you go. It may sound like overkill, but you never know when it may register a frequency you've never heard before. By working backward—you've got the freq, now you need to know who uses it—you can add another target to your list.

The best resource, bar none, is your own two eyes. No phone book or map can beat your ability to find scanning opportunities through simply keeping your eyes open. When you're out and about, look at the buildings around you and note new establishments that may use radios. Become an antenna spotter, looking for antennas on buildings, hills and cars. While driving the other day, I saw a vehicle with an attorney service logo on the door. Smack in the middle of the roof was a silver cellular-type antenna. I pegged it for an 800 MHz antenna and went hunting for the frequency. It's listed in a freq book on an 800 MHz SMR (Specialized Mobile Radio) system.

Another Target Locked

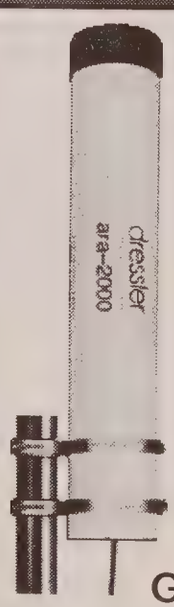
Whenever you're looking for something new to monitor, try running through the itinerant business frequencies like 154.600, 154.540, 151.625, 464.500, 464.550 and the like. These are always good for some low-powered communications from road crews, crane operators, construction companies, hospitals, schools and local businesses. Often there are several companies using the freqs at the same time, making it a real circus to discover who is who. This alone can turn into a full time job!

Scanning targets are all around you, limited only by your ability and your willingness to find them. For me, it's a personal quest, something that gets me thinking, gets me working the scanner dials, punching the buttons, trying to come up with the answer. I can listen to the known, the confirmed, but it's a hoot just to go searching. I'm usually not disappointed, as there's always something that interesting. Why, just the other day I was listening to an FM broadcast station, enjoying the music while I worked outside, when a transmission bled through: "Ready for test." What? Where did that come from? Had to be close, to bleed through to the FM band. I heard it twice more before I finally broke down and went for the scanner. No, I haven't found the frequency yet, but I'm determined. Somewhere out there is a transmission I haven't monitored before and I'll search til' I find it.

So, about that guy I overheard who said that after awhile there's nothing new to listen to. Well, all I can tell him is, you must be blinded by the glare, pal, because there's plenty new under the sun if you know how to look.

Questions? Comments? Write me care of the magazine or e-mail me at 73733.1653@compuserve.com. **USSN**

NEW VHF/UHF ACTIVE ANTENNA!



dressler ara–2000

Successor to the popular ara–1500 model, the new ara–2000 utilizes a GaAs–FET amplifier for maximum gain (11–13 dB up to 1.5 GHz) and minimum noise figure (1–2.5 dB), while delivering excellent third–order intercept point performance (+40 dBm below 500 MHz, +43 dBm above 500 MHz). Coverage from 50—2000 MHz, circular polarization, N–type coax connectors. A fantastic antenna for the Icom IC–R7000/R7100, AOR and Realistic Scanners, and other wideband receivers. Call for free catalog.

GILFER PRICE: $269.95 (+10 s&h) Order #D04220

NEW HOURS:
M–F 10a-8p EST
Sat. 10a-5p EST

GILFER

52 Park Avenue
Park Ridge, NJ
07656

TOLL FREE ORDER LINE: (800) GILFER–1
NJ & Technical: (201) 391–7887 • Fax: (201) 391–7433
E–Mail: gilfer@haven.ios.com • WWW Home Page: http://www.pics.com/gilfer

FCC NEWS

Latest News From The FCC

by USSN Staff

Last summer the FCC's Commercial Wireless Division granted the application of American Mobilphone, Inc. (AMI) and RAM Technologies, Inc. (RAM) for the transfer of AMI's licenses in the Paging and Radiotelephone Service to RAM. RAM, one of the largest common carriers in the country, evidently was seeking to expand their operations in the Kentucky, West Virginia and Ohio region by buying systems belonging to AMI in Kentucky.

The transfer was opposed by Capitol Radiotelephone Company. Capitol is the largest common carrier of paging and mobile telephone service in West Virginia. Capitol submitted that RAM "lacked the requisite character qualifications" to be a Commission licensee. They cited their previous conduct and the related statements made by an FCC Administrative Law Judge in an earlier proceeding involving Capitol and Ram.

What was the earlier proceeding? And what was said about RAM? What's the whole story here?

Capitol has been an FCC licensee for over 30 years and provides mobile telephone and paging service throughout much of West Virginia and a portion of Ohio. They are also certified and regulated by the West Virginia Public Service Commission. Most of their business is common carrier paging service under Part 22. They have approximately 2,900 customers, with over 10,000 units in service. In 1990, Capitol decided to get into the Private Carrier Paging (PCP) business.

The FCC introduced Private Carrier Paging in the mid-80's. Under the concept, licensees of PCP stations are entrepreneurs who construct the radio facilities and provided the equipment to the end users on a for-profit basis. (Previously, the channels available for paging use in the Industrial Radio Services could only be used for a companies own internal needs.) Besides the forty paging channels in the 929 to 930 MHz band, the other available frequencies are pretty much limited to Business Radio Service paging channels at 152, 154, 157 and at 462.75 to 462.925 MHz. The service is similar to the Specialized Mobile Radio Service at 800 MHz, where the owners of SMRS systems are allowed to charge for the use of their systems, since few individual users would likely be able to construct their own expensive, trunked systems. In both cases, the end users had to be eligible in one of the Private Land Mobile Radio services in order to be able to subscribe to PCP (or SMRS) service. This restriction, however, was later eased, and eventually eliminated. PCP licensees (SMR's, as well) are now allowed to provide service to anyone, including private individuals and the U.S. Government.

PCP service is particularly attractive to existing common carriers because it is not subject to the many restrictions imposed on common carrier providers, including state regulation. Also, many times a common carrier may not be able to justify the assignment of another common carrier paging frequency (they can't prove that they have enough current or potential customers), while a PCP assignment requires no such proof of need.

But one big disadvantage of the PCP service is that, like most channels in the Private Radio services, the frequencies must be shared with other licensees. (This was only recently changed with respect to the 929 MHz frequencies. Licensees on these channels can now gain an exclusive assignment.)

Capitol chose to apply for the frequency 152.48 MHz because, at the time, it was the only VHF PCP frequency on which high-powered paging transmitters were allowed. The other Business Radio Service frequencies in VHF high band were limited to low power use, although the FCC did later amend its rules to allow higher power on the frequency 157.74 MHz.

At the time Capitol filed its PCP application, however, RAM Technologies, Inc. was a PCP licensee on 152.48 MHz at various locations in Kentucky, Ohio and West Virginia, including Charleston, West Virginia. RAM started its PCP business in early 1989 and it was highly successful. For that reason, it appears that RAM was determined not to share the channel with Capitol or any other competitor, regardless of whether it was required by law to do so or not!

The Strategy

When Capitol sent in its application to NABER (the frequency coordinator) in December 1989, RAM protested the application, arguing that 152.48 MHz was too busy from RAM's use of the channel to permit Capitol to be licensed. Nonetheless, NABER coordinated Capitol's application for 152.48 MHz on March 22, 1990, and forwarded the application to the Commission for processing.

RAM immediately started filing a steady stream of protests to the FCC, attempting to prevent Capitol's application from being granted. These protests included a Petition to Deny under section 309(d) of the Communications Act and a companion Motion for Stay of Application, ignoring the fact that Section 309(d) petitions are not even permitted to be filed against PCP applications!

In these protests RAM claimed that Capitol was applying for its proposed PCP license for the purpose of "caus(ing) harmful co-channel interfer-

ence" to RAM's operations. This type of allegation by RAM was not unique. They made similar allegations to NABER about the intentions of another competitor, Communication Service, Inc., about this same time, after they complained to NABER that RAM's operations on 152.48 MHz were violating Commission rules.

On August 9, 1990, what was then the Private Radio Bureau initially rejected RAM's various protests against Capitol as "erroneous, unfounded and unsupported." However, RAM was undeterred and promptly filed a petition to overturn the Bureau's decision, along with another motion seeking to stay the proceedings on Capitol's application.

After the Bureau rejected this protest, RAM then went so far as to recruit Carl C. Perkins, a Member of Congress from Kentucky, to lobby the Commission on RAM's behalf. Congressman Perkins repeatedly intervened with the Commission on behalf of RAM. One of the actions Perkins took was to request that the FCC require Capitol to move its proposed PCP operation to the frequency 157.74 MHz which, by then, had been made available for high-powered PCP transmitters. But this was not practical for Capitol, since one of their biggest common carrier paging customers was using that frequency for an emergency service in the Charleston area. Capitol understandably did not want to risk alienating them by initiating a PCP service on that frequency! Also, moving to 157.74 MHz was undesirable for Capitol because it would limit Capitol's eventual ability to network with other PCP systems.

In spite of even the Congressional intervention on RAM's behalf, the FCC granted Capitol its initial PCP license for base station facilities on 152.48 MHz at Charleston, West Virginia and Huntington, West Virginia, call sign WNSX646, on September 12, 1990.

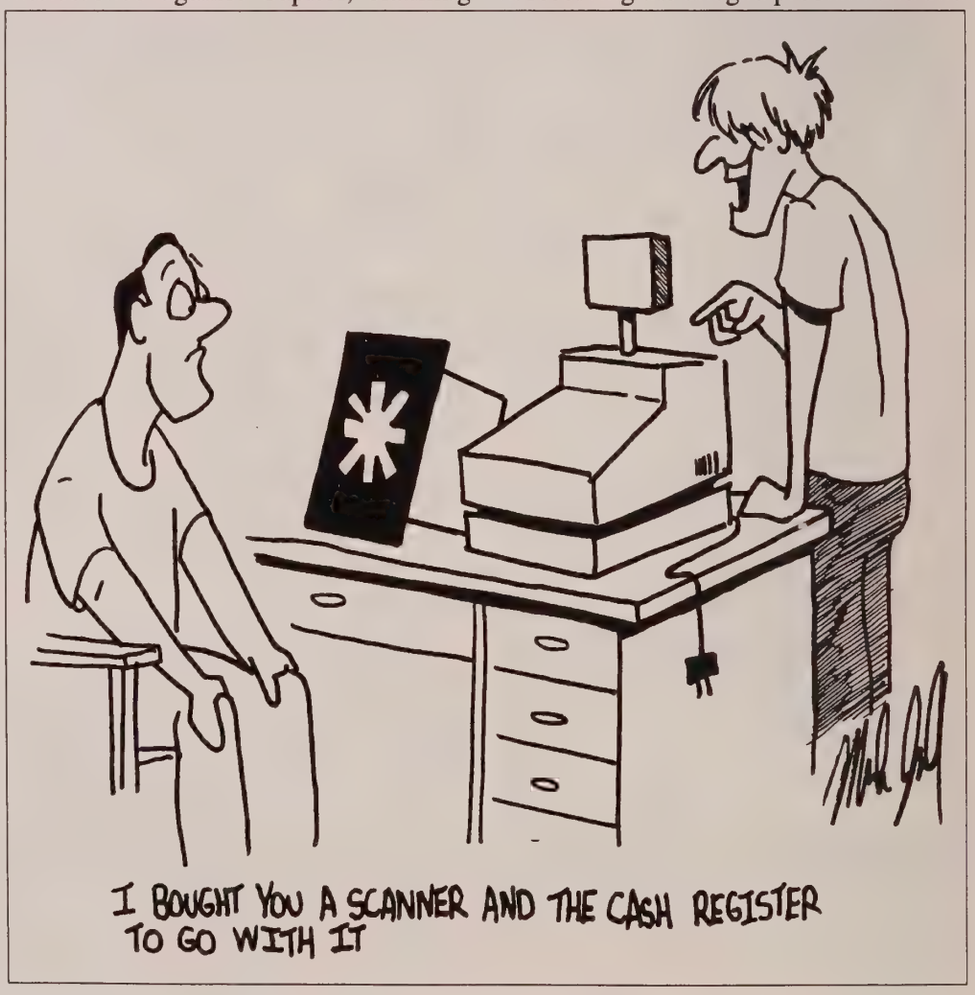
The Plot Thickens

What followed was an outrageous series of complaints and counter-complaints, plus inept investigations and charges by the FCC's Enforcement and Compliance Division.

After Capitol's license grant, RAM filed a written complaint with the FCC, alleging that Capitol was retransmitting pages from 152.51 MHz (Capitol's wide-area Common Carrier paging frequency) on their 152.48 MHz frequency, just to take up air time, and that these transmissions were causing harmful interference to RAM's operations. According to RAM, the alleged retransmissions caused an almost perfect "stereo effect" when RAM personnel simultaneously monitored the frequencies 152.51 MHz and 152.48 MHz. Capitol submitted a declaration by their Vice President and Chief Operating Officer, under penalty of perjury, categorically denying RAM's allegations. The fact was, Capitol *had not even started operating* its PCP system at that time! The station was placed into operation the latter part of March, 1991. Ram offered no evidence rebutting this assertion. The "stereo effect" phenomenon RAM referred to was probably "intermod," of which Capitol would have no knowledge or control.

RAM next filed a complaint of interference against Capitol, claiming that their automatic Morse Code station identification on 152.48 MHz was interfering with RAM's paging transmissions. At that time, Capitol was in the process of installing and testing its PCP system and was getting ready to initiate commercial service. Its system consisted of base station transmitters in Charleston and Huntington. Capitol's paging terminal was connected to the PCP base station in Charleston by dedicated telephone line and a UHF control link was used to link the Huntingdon transmitter. A Relm brand transceiver was modified to function as a fixed-tuned receiver, monitoring 152.48 MHz to inhibit Capitol's PCP transmitter from operating whenever a co-channel signal was detected by the receiver. This "inhibitor" was in place and functioning in Capitol's PCP system throughout Capitol's operation, both in the initial constructing and testing stages and after commercial operation started.

Regardless of the source of the alleged interference, Capitol's owner attempted to be cooperative with RAM in resolving the alleged problem and and



promised send a technician to the site to identify the problem. Well, the tech was unable to investigate the problem that day, but the alleged interference stopped later that same day anyway! This made the FCC doubt the veracity of the complaint in the first place. RAM also admitted that they had disabled their *own* inhibitor on 152.48 MHz, so that it would transmit over the "interference" from other transmitters. As a result, when Capitol attempted to start its commercial PCP service on March 1, 1991, RAM repeatedly initiated paging transmissions on its system at the same time paging transmissions by Capitol were in progress, "covering" their pages. Capitol complained about how RAM would transmit on 152.48 MHz for long periods of time, sometimes up to 15 or 20 minutes, before relinquishing the channel to co-channel users. FCC rules required PCP licensees to shut down their system after three minutes to allow other licensees to use the channel, and it was obvious to Capitol that RAM was not doing so. Capitol considered this another form of interference to its operations by RAM, because it prevented Capitol from transmitting its pages.

The Showdown

On April 2, 1991, the Private Radio Bureau held a meeting at its offices in Washington. D.C. with counsel for Capitol, counsel for RAM, principals of RAM and a representative from the Office of Congressman Perkins. At that meeting the staff bluntly told RAM and Capitol to cut out their fighting and obey the rules or all of their licenses would be revoked. Capitols owner did not interpret this threat as being directed solely against them. They didn't believe they were doing anything wrong and that they were sincerely trying to comply with their obligation to share the channel and with the rules governing PCP operations. They felt that the only thing needed for RAM and Capitol to get along was for RAM to use its inhibitor and to shut down after 3 minutes to let Capitol transmit. RAM did not dispute that it tied up the PCP channel for long periods of time. In fact, according to their senior Vice President of networking services, during the busiest parts of the day, RAM transmitted 50 or more minutes per hour for a stretch of 4 or 5 hours.

Because of technical problems with their own links, Capitol experienced continuing problems with its system which affected the reliability of its service. Because of these technical difficulties—RAM's interfering transmissions, and its continuous use of the channel for long periods of time without relinquishing it for co-channel users—Capitol experienced considerable turnover of customers that tried the PCP service and found it unsatisfactory. Capitol had only a handful of customers on its PCP system in 1991.

On July 19, 1991, RAM again complained orally to the Commission that Capitol was maliciously interfering with RAM's PCP system, claiming that Capitol had a "device that is patched in to its paging base station that imitates the sound of a tone page transmission". RAM further claimed that this "device used by Capitol is paging station testing equipment" which "is capable of being removed in less than one minute". However, Capitol was not served with a copy of any such complaint, nor was it made aware of any such complaint by RAM at the time. They stated that they never had and never used such a device.

Nonetheless, as a result of this complaint, the Private Radio Bureau immediately requested the Field Operations Bureau conduct an inspection of Capitol for the purpose of finding grounds to revoke Capitol's licenses!! Two engineers from the FCC's Baltimore Field Office made a field trip to the Charleston/Huntington area to conduct monitoring of 152.48 MHz and inspections of Capitol's and RAM's PCP stations during the period August 12-15, 1991. During this period, the inspectors monitored 152.48 MHz and kept logs, as time permitted. They heard predominantly digital transmissions, which they identified as transmissions by RAM, and fewer tone paging transmissions, which they identified as transmissions by Capitol.

The tone transmissions identified as Capitol transmissions appeared to be identical sequences of tones—a set of two sequential tones repeated once, followed by a second and third set of sequential tones. According to the inspectors, the tone sequences identified as Capitol transmissions were transmitted approximately once a minute when the channel was available but when it was busy, the tones were held until air time was available on the channel. These transmission were legitimate test transmissions by Capitol. The inspectors also observed Morse Code station identifications by Capitol at the rate of approximately seven words per minute. This speed translates into about 15 seconds of air time per identification. (FCC rules require a rate of 20 to 25 wpm.) During their monitoring, the inspectors observed instances of RAM initiating transmissions before Capitol ceased transmitting (i.e., instances of RAM "walking" on Capitol's transmissions), as well as instances of Capitol "walking" on RAM's transmissions. The inspectors observed that RAM "walked" on Capitol's transmissions more than vice versa; in fact, their logs show that such instances were caused 90 percent of the time by RAM and only 10 percent of the time by Capitol.

During the inspection of RAM's PCP transmitter, the FCC engineers discovered that RAM had installed a device on its channel monitor to delay RAM's paging transmissions for only a maximum of two minutes, whether or not anyone else was using the channel. The decision to install such a device was made by Robert Moyer, the owner of RAM, and he knew when he installed it that it was illegal.

By contrast, the inspectors never were able to determine why Capitol occasionally "walked" on RAM's transmissions. The explanation probably is that transient factors such as local traffic, signal fades and the like, prevented Capitol's monitor from detecting RAM's signal in particular situations. It was felt that Capitol did not knowingly transmit while RAM was already on the air. Capitol assumed that it had passed the inspection and that it did not need to take any further action.

But on July 30, 1992, the Private Radio Bureau issued a Notice of

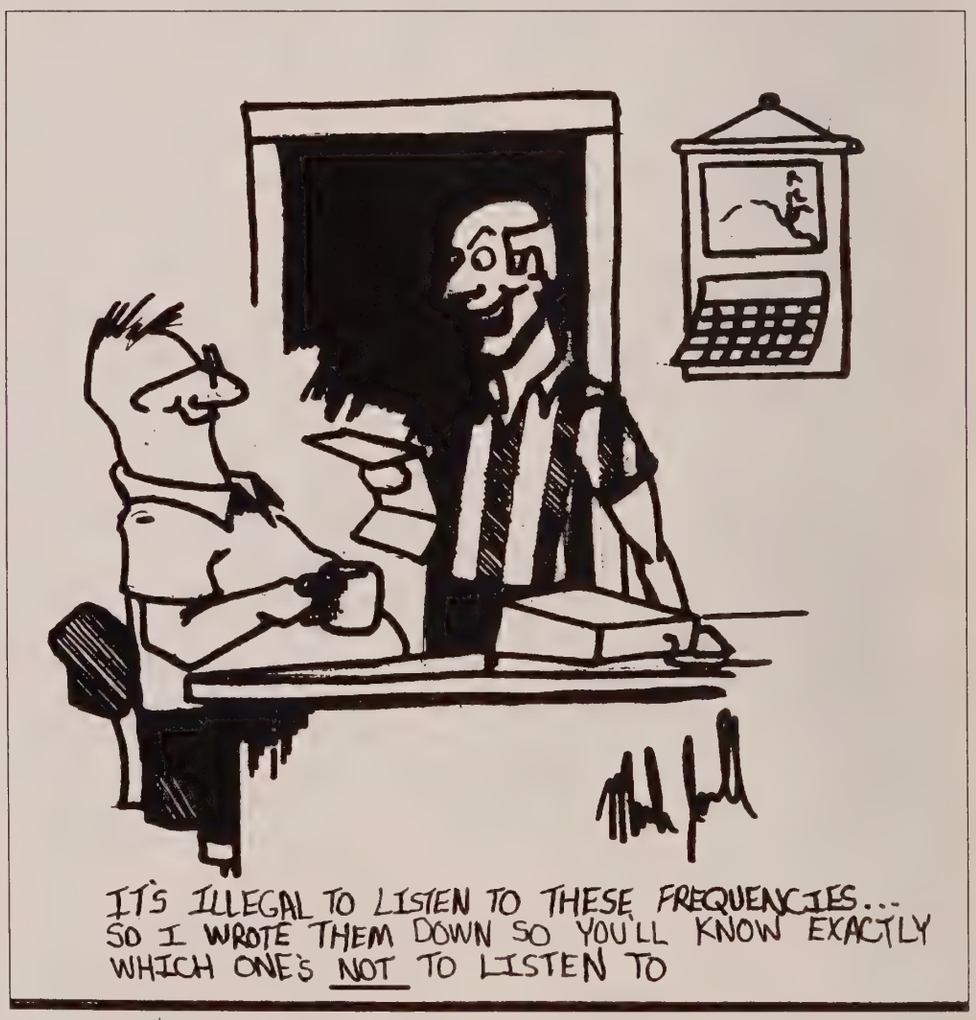
Apparent Liability for Forfeiture alleging "willful and repeated ...malicious interference" by Capitol to RAM and other "egregious misconduct." The Bureau alleged that forfeitures totalling $42,000 were warranted for malicious interference in violation of Section 333 of the Communications Act; "forfeitures totalling $6,000 were warranted for failure to take reasonable steps to avoid harmful interference, in violation of Section 90.403(e) of the Commission's rules; and forfeitures were warranted totalling $3.000 each for violation of Sections 90.405(a)(3) and 90.425(b)(2) of the rules (excessive testing and morse code identification slower than the prescribed rate of 20-25 words per minute, respectively). The Bureau then reduced the calculated total forfeiture from $54,000 to $20,000 so that the NALF could be issued under delegated authority (not requiring action by the full Commission). At the same time, the Bureau sent a warning letter to RAM that use of the two-minute time-out device on its system was improper. No forfeiture of any kind was imposed on RAM. A date for a preliminary hearing on the matter was scheduled in August, at which time a "hearing designation order" would be adopted and an "order to show cause" imposed on Capitol.

A Hearing Designation Order requires a determination whether Capitol willfully violated the Commission's Rules and whether Capitol misrepresented facts and lacked candor in its dealings with the Commission. The Private Radio Bureau (PRB) had the burden of proof on all the designated issues. And according to the FCC Administrative Law Judge's Initial Decision in this matter, the PRB failed to satisfy its burden. They stated that "the evidentiary record convincingly establishes that Capitol has not willfully or repeatedly violated the Commission's Rules, that it has not intentionally deceived the Commission, and that it has been candid and forthcoming in its dealing with the Commission." They therefore concluded that there was no justification for revoking any of Capitol's licenses or for imposition of a forfeiture.

Among their conclusions was that Capitol, alleged to have sought entry into the PCP business merely to disrupt RAM's business, in fact had completely different pricing and marketing structures and competed for a different class of customer than RAM. Also, it was never proven why a company that had been in business for over thirty years would engage in such tactics to protect what was only a minor portion of their total business. Furthermore, one of RAM's own employees admitted that "interference that is actually harmful is the simultaneous transmission (i.e.. "walking" on another licensee's transmissions)." Yet these types of transmissions were rarely caused by Capitol and their transmissions, even the ones alleged to be "dummy" pages, all occurred during otherwise unoccupied channel time! The PRB failed to cite a single case where transmissions during unoccupied channel time had been held to constitute "harmful interference."

The judge went on to say in his Decision that "In short, the PRB has failed to suggest a credible motive for the scheme it alleges, much less demonstrate such motive by evidence. On the other hand, RAM's motives for attempting to run Capitol and other competitors off the PCP channel are self evident. RAM has a very successful PCP business and it was determined not to share the channel with other competitors, notwithstanding that it is required by law to do so. (O)perators with a large number of subscribers will do whatever they can to protect their business interests."

"Consistent with its anti-competitive objectives, RAM embarked on a calculated course of conduct to prevent Capitol from ever getting a license in the first instance, or to drive it off the frequency if ever licensed. Even after the PRB rejected RAM's various (early) protests as erroneous, unfounded and unsupported, RAM did not cease its efforts to drive out its potential competition so that it could continue to



monopolize the shared channel."

"RAM's actions establish that it was not interested in cooperating with Capitol in the use of the channel. Rather, it was determined not to share the channel with Capitol notwithstanding that it was required by law to do so. As pointed out.., channel sharing reduces the amount of channel-time available to the sharing entities. In light of RAM's large number of subscribers, it is clearly in RAM's economic interest to have the channel all to itself, rather than to share the channel with a competitor such as Capitol."

Most significant was the judges statement that "notwithstanding that RAM's charges were uncorroborated, the Private Radio Bureau has accepted RAM's versions of the facts without question."

From all appearances, the Private Radio Bureau was all too eager to protect the interests of the large, national company. They could care less about the small, local company. As the judge said "No mention is made of Capitol's complaints about RAM's action, which is indicative of the uneven treatment accorded to RAM's and Capitol's complaints."

What makes the Private Radio Bureau's actions all the more outrageous is that their case rested entirely on the testimony offered by RAM principals and employees. The Judge decided that "their testimony, which is not corroborated by single non-RAM affiliated witness, is entitled to no weight."

And the Judge came to just the opposite conclusion concerning Capitol: whether Capitol misrepresented facts to the Commission or was lacking in candor. "Again, the evidence overwhelming requires resolution of this issue in favor of Capitol."

"(T)he evidence is overwhelming that Capitol's PCP operations were bona fide at all times, including the times it was engaged in testing, and that the representations Capitol made to the Commission in response to RAM's complaints were entirely truthful and accurate. Therefore, there is no basis for finding lack of candor by Capitol with respect to any of these matters."

The Judge summed matters up by declaring that "the evidence adduced at the hearing conclusively establishes that Capitol's application for and operation of its PCP station was in all respects a bona fide business venture. Capitol has not "willfully" or "repeatedly" violated the Commission's rules governing PCP operations and has at all time dealt honestly and forthrightly with the Commission. It is therefore concluded that there is no justification for revoking any of Capitol's licenses or for imposing a forfeiture."

"Accordingly, it is ordered that the "Order To Show Cause" and "Order Of Forfeiture" are vacated and this proceeding is terminated."

And that's how it ended. Except that the Private Radio Bureau (now the Wireless Bureau) has appealed some aspects of the Judge's decision—apparently those that made them look especially incompetent.

So the more recent transfer of the licenses of American Mobilphone, Inc. (AMI) to RAM was approved, over the token objections of Capitol Radiotelephone Company. The Commercial Wireless Division ruled that Capitol did have standing to file an opposition (as a competitor that could suffer economic injury) but that the statements of the Administrative Law Judge in the Capitol proceeding only pertained to Capitol, who was the party under consideration. His statements regarding RAM are not binding upon their review of RAM's qualifications in this proceeding! The application for transfer of the AMI's licenses to RAM was granted.

This isn't exactly the type of story that makes the front pages, so there probably are not many people who are aware of it. But it sure demonstrates the type of behind-the-scenes activity that occurs all too often.

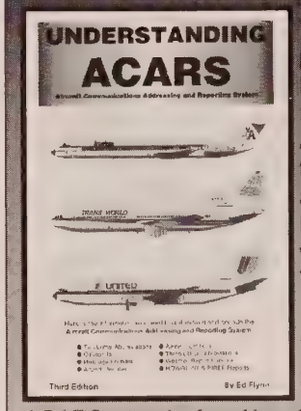
Next month:

Details of the FCC's new plan to auction off the trunked SMRS channels at 800 MHz.

USSN

UNDERSTANDING ACARS

Aircraft Communications Addressing and Reporting System



This new 92 page book by Ed Flynn is ***the*** definitive ACARS book for serious VHF aeronautical DX'ers worldwide. Third Edition.

Only ... $9.95 (+$2)

ACARS stands for *Aircraft Communications Addressing and Reporting System.* This VHF teletype mode is used to transmit data and messages between commercial aircraft and airport ground stations. These transmissions at 131.55 MHz., can be heard on any scanner with the VHF aircraft band. With the proper decoder and this book you can intercept and understand this interesting traffic. If you enjoy VHF aeronautical listening you will want to learn about this fascinating development.

universal radio inc.

Universal Radio
6830 Americana Pkwy.
Reynoldsburg, OH 43068
◆ Phone: 800 431-3939
◆ FAX: 614 866-2339

NOW YOU DON'T HAVE TO MISS ANY SCANNING EXCITEMENT!

The new Action Tape Controller plugs into your scanner and tape recorder. Recorder will then directly record whatever scanner picks up, and stop recording whenever the scanner is silent! Needs no batteries nor AC power. $31.95, PPd. Worldcom, Box 3364, Ft. Pierce, FL 34948. Phone 407-466-4640.

Support Your Advertisers.
Say You Saw It In
U.S. Scanner News

TECHNICAL STUFF

Cordless Phones, Then & Now

Cordless Telephone Frequencies, Past, Present and Future.

by Steve Donnell, WA1YKL

It is quite interesting to see how cordless phones have evolved over the past 15 years or so that they have been on the market. It was only a couple of years ago that the first 900 MHZ models appeared. With the introduction of the first 900 MHz "Topaz" brand cordless phone it seemed that things would change very quickly as far as the accessibility to what was, until recently, very legal and very fun monitoring. For now at least, it hasn't. For cordless phones that do employ digital modulation schemes, you can still expect to pay as much as three times the price of a phones that use conventional analog FM modulation, which is certainly helping to slow their acceptance in the marketplace. Over time, you can easily expect the prices for the digital cordless phones to drop considerably.

While many new 900 MHz cordless phones are now available, it seems that only about 30 percent or so use the more advanced and more secure digital spread-spectrum-modulation schemes. A majority of 900 MHz cordless phones actually still use good old "analog" FM. I wonder if this might, to a small extent, be a bit of "bait and switch" marketing, as some portion of the general public thinks that all 900 MHz cordless phones use secure digital modulation formats. The simple truth is somewhat different. Recently I had the chance to do some work on a friend's 900 MHz cordless phone. It was a Panasonic model KX-T9500, which uses analog FM modulation. It's specified to operate on 30 different channels. But in testing it, I found this to be a bit short, as it actually could switch between up to 33 different channels. Using my Startek frequency counter and Icom IC-R7000 receiver, I logged all of the operating channels of the phone as the following:

Base Unit Frequencies, in MHz:

902.250	902.500	902.750	903.000
902.275	902.525	902.775	903.025
902.300	902.550	902.800	903.050
902.325	902.575	902.825	
902.350	902.600	902.850	
902.375	902.625	902.875	
902.400	902.650	902.900	
902.425	902.675	902.925	
902.450	902.700	902.950	
902.475	902.725	902.975	

The remote hand-held part of the phone transmits on frequencies exactly 24 MHz higher than each of the corresponding base units frequencies, in the 926.250 to 927.050 range. The frequencies are assigned randomly, a new one is selected any time the remote is placed in the base unit for battery charging.

In reading through the Service Manual for a Radio Shack ET-900 900 MHz cordless phone, it lists 60 different operational channels that the phone can automatically select from. The Base unit frequencies range from 902.120 MHz, up to 903.890 MHz, with 30 KHz spacing between channels. The hand-held remote unit operates on frequencies exactly 24 MHz higher. These frequencies for the Radio Shack phone and another one very similar to it used in an earlier Panasonic phone, were first reported about a year ago in the American Scannergram newsletter.

So far there still seems to be no real "standard" bandplan for 900 MHz cordless phones. Offhand, I am not too surprised by this, given the "wide open" nature of the 902 to 928 MHz band. With cordless phones and other products designed for the 46/49 MHz band, a limited slice of spectrum is shared with many other licensed and unlicensed radio services. The 900 MHz phones simply make the best use of the available spectrum, placing as wide a possible separation between the base and remote handheld units. This makes for easier (cheaper) design of the duplexing filters that allow the respective halves of the equipment to simultaneously receive and transmit, which is not as easy as you might think.

The transmit power levels specified for both the Base and Remote portions of the ET-900 is only -4 dBm,

or about half a milliwatt. While you might think that this would drastically limit the range of the phone, remember that at 900 MHz, the wavelength of the frequency permits use of full-size, quarter wavelength or half wavelength antennas for greater signal radiation efficiency. A 900 MHz "bug" that I designed a couple of years ago, that uses about the same transmit power output, has a receivable range of over 200 feet.

Inside the base portion of the Panasonic T9500, I saw on the main "motherboard" the electronics for the power supply, the telephone interface circuitry and a two-chip control computer, all of which looked pretty conventional. The Radio Frequency electronics were in a sealed, shielded module about half the size of an audio cassette. This module plugs into the motherboard. I'm not sure if this approach is just used to keep manufacturing costs low or because it makes it easier to interchange RF operating channels or bands, as needed to meet changing regulations and to make the phones easier to market in other parts of the world.

It's interesting to see, but not regrettably so, that cordless phone manufacturers don't place a greater emphasis on "voice privacy." Even for those phones that employ even a low level of encryption such as one known as "voice inversion," there is still a hefty premium to pay for it. Previously, most voice inversion scrambling employed in cordless phones made use of a pilot tone of 3,333 Hz. Some of Uniden's latest 46 MHz cordless phones that include voice inversion reportedly make use of a less common pilot tone of 3,700 Hz. This can make decoding of inverted audio with a descrambler that uses a fixed (crystal-based) pilot tone generator much more difficult (but not impossible). A descrambler unit, such as the one available from a small company called CTP, uses an adjustable pilot tone oscillator that will make dealing with this sort of thing a lot easier.

I heard a rumor a while back that at least some of the old Topaz phones with digital modulation were not actually as secure as was thought. It seems that some emitted a rather strong signal, in the 440 MHz Ham band, on or near 448.00 MHz, which had regular FM voice modulation on it. Apparently this carrier would be mixed with a digital baseband or another RF carrier prior to transmitting on 900 MHz. Later production models (unfortunately) corrected this problem by using improved shielding.

In my old service shop job, we repaired early designs of cordless phones. Those first generation phones operated on 49 and 1.8 MHz with only 5 channels, as you might recall. They did not have CPU's for any control or security functions. The most advanced component they used was a dialer IC that was "programmed" by the remote's keypad which, in turn, pulsed the remote unit's pilot tone (similar to a PL tone) in order for the base unit to key-pulse the telco line to permit dialing outgoing calls.

Access security in first-generation cordless phones was very poor. I recall once that after fixing a phone, I set it aside and a few minutes later, it started to ring. I had accidently left the remote in Standby mode. I walked over to the phone and switched it ON and heard a very clear dial tone. Apparently someone who lived nearby had a cordless phone that used the same radio channel, along with the same frequency pilot tone. There were only about three or four different tones used, all in the 6 KHz area. Later-design phones employed a simple lockout switch that prevented a base unit from connecting to the telephone line if the remote was sitting in the charger. FCC rules now require newer version cordless phones all employ digital pulse coding to ensure that only the corresponding remote can access a given Base unit.

As the cost of newer circuit technology drops, cordless phones produced in the future will almost certainly employ more digital modulation schemes, both as a way to enhance security and reduce problems with noise. Some may operate in a dual-mode format: As a conventional cordless phone at home; and operating as a low power Cellular or PCS (Personal Communications Service) phone when away from home. New PCSs will take several forms. They will all employ digital voice modulation formats, possibly TDMA. New PCSs being deployed in several major cities around the country use the following bands:

Frequency(Base unit)	Group/Use
1930 - 1945 MHz	Band A
1945 - 1950	Band D
1950 - 1965	Band B
1965 - 1970	Band E
1970 - 1975	Band F
1975 - 1990	Band C

Handheld mobile units operate on frequencies exactly 80 MHz lower, in the 1850 to 1910 range, using nominal power levels of about one milliwatt. Frequency bands A to F are assigned to different licensees, in various regional market areas. Frequencies from 1910 to 1930 MHz will be available for various unlicensed devices.

USSN

SEX is not what we want to discuss, but now that we have your attention, have you renewed your subscription to U.S. Scanner News?

SATELLITE RADIO BOOK & GUIDE

NEW BOOK covers all Audio Services, SCPC, Subcarriers, FM², Facsimile, Press Services, Weather Services. Simple how-to-receive instructions. SATELLITE RADIO GUIDE INCLUDED. $16.95 plus $3 Priority Mail ($19.95 total)

UNIVERSAL ELECTRONICS, INC.
4555 Groves Road, Suite 12
Columbus, OH 43232 (614) 866-4605

Legal Forum

Gass Conviction Overturned

by the USSN Staff

A U.S. District Court judge for the Northern District of Oklahoma has overturned the conviction of Larry Nathan Gass for violations of the Communications Act. (See previous article, October '95 USSN.) Gass, owner of Tulsa Security Patrol and Action Helicopter Services, was convicted for modifying commercial land mobile radios (mainly for the media) to enable them to receive all of the channels, or "talk groups," of Tulsa, Oklahoma's 800 MHz trunked radio system. Like many cities, Tulsa will modify privately-owned radios to allow them to receive certain of their channel groups. These are usually just patrol channels. Tulsa, for example, only allows the monitoring of four channel groups, denying access to the remainder of their channels. Of course, we all know that any of the frequencies may be received with a $229 scanner but that following a conversation as it switches from channel to channel each time they unkey their mike and the repeater times out is a different matter. During the trial, Gass' attorney attempted to introduce evidence of how easily trunked communications can be monitored (but not tracked) with simple, inexpensive scanners. The judge disallowed this, since the trial dealt with the modification of commercial two-way radios to receive the frequencies, not with scanners. In fact, this was what Gass was ultimately convicted of—not of intercepting the communications, but of aiding others to do so. Section 605(e)(4) states that "any person who manufactures, .. modifies, .. sells, or distributes any electronic .. device or equipment, knowing or having reason to know that the device or equipment is ... intended for (an) activity prohibited by subsection (a) of this section, shall be fined not more than $500,000 for each violation, or imprisoned for not more than 5 years for each violation, or both." Gass would be liable under this provision if, in fact, a violation of subsection (a) had occurred, since he sold or modified equipment capable of intercepting all of Tulsa's radio communications.

What does the Law say?

The final decision was made based on a complex analysis of the wording and intent of Section 605 of the Communications Act (Title 47, Section 705), which deals with the privacy of communications. The very first sentence of Section 605(a) states: "Except as authorized by Chapter 119, Title 18, no person receiving, assisting in receiving, transmitting, or assisting in transmitting, any interstate or foreign communication by wire or radio shall divulge or publish the existence, contents, substance, purport, effect, or meaning thereof, except through authorized channels of transmission or reception."

Now the key phrase here is "Except as authorized by Chapter 119, Title 18." Title 18 contains the WireTap Act, plus the provisions referred to in this instance, the famous Electronic Communications Privacy Act of 1986. As we all know, the ECPA added provisions to Chapter 119 of Title 18 which, among other things, prohibit the monitoring of certain radio services, such as most common carrier services and transmissions that are encrypted. But the ECPA also specifically exempted communications that are "readily accessible to the public," including those transmitted "by any governmental, law enforcement, civil defense, private land mobile, or public safety communications system, including police and fire."

The SECOND sentence of Section 605(a) goes on to say "No person not being authorized by the sender shall intercept any radio communication and divulge or publish the existence, contents, substance, purport, effect, or meaning of such intercepted communication to any person." It was the Governments (the prosecutors) contention that the phrase "Except as authorized by Chapter 119, Title 18" only applied to the FIRST sentence of Section 605, not to the second! Gass' contention, and the basis for his appeal, was that the sentence applied to Section 605(a) in its entirety and that no violation of Chapter 119, Title 18 had occurred since it is perfectly legal to monitor these communications.

This may all seem like nitpicking to you and me, but the District Court went through a complex analysis of the wording of this provision, past cases dealing with this provision, and Congress' intent when that first sentence was added in 1968 with the adoption of the Wiretap Act.

The Government was not able to cite any decisions and could only rely on one scholarly work on the subject, written in 1985 (before the ECPA). Gass' attorneys, however, cited three Circuit Court cases that have held that the reference to Chapter 119 applies to the entire paragraph of Section 605(a), and that this was Congress' intent when they added the provision in 1968. The District Court agreed with these "sound decisions" and stated that they "cannot accept the arguments espoused by the Government that Chapter 119 only qualifies the first sentence in Section 605(a). To do so would

produce anomalous results, which Congress could not have intended." They went on to say that "especially in light of the 1986 amendments to Chapter 119 [the ECPA], the Wiretap Act does, in fact, limit the applicability of Section 605(a) with respect to RADIO communications, contrary to the Governments position."

In an exceptionally lucid statement, they said that "If this Court were to give effect to the Government's argument, then the governmental radio interception exception contained in Chapter 119 makes no sense; a person would be permitted under Chapter 119 to intercept police radio transmissions only to be subject to criminal prosecution under Section 605. Why would Congress impose a ban on interception ... in one statute, while allowing for a specific exception in another, if it did not intend for the statutes to be read together? The only way to avoid absurdity in such a case is to interpret the conflicting statutes in a manner which permits (them) to complement one another."

The Court also mentioned the legal maxim of "specific over general," wherein the Supreme Court has declared that a more specific statute (such as the ECPA provisions SPECIFICALLY addressing interception of police communications) will be given precedence over a more general one (such as Section 605).

The Courts conclusion is that the issue at trial should have been directed to the provisions in Title 18, specifically the exemption for intercepting police communications, and whether there had been a violation of any provision of the ECPA or Title 18 in general.

So now what?

The District Court ordered an acquittal based on Gass' conviction under Section 605(e)(4), since no violation of Section 605(a) had occurred. (He can't be prosecuted under section (e) for modifying the radios, since their use did not violate section (a).) The Court cannot order a new trial on its own and Gass did not petition for a new trial, only a move for acquittal. The only course of action available to the prosecution at this time is to proceed with a new trial based on whether or not a violation of Chapter 119, Title 18 did indeed occur. (This was not considered at all during the first trial.) If so, prosecution for violating Section 605 could proceed. The Assistant U.S. Attorney handling this case indicated to us that the appellate division of the Department of Justice is reviewing the matter and that he intends to do pursue the case. Given the clear wording of Title 18 regarding the permissible interception of police communications, this sure seems like a futile effort, though. Gass also faces a civil suit filed by Motorola for violation of the copyrights held for their trunking system protocol.

USSN

Frequency Forum

Public Safety License Applications

The information in this column is raw FCC data and may contain duplications and typos. Listed below are Public Safety licenses that are ***PENDING*** FCC approval. Note that many of these may be licenses for additional transmitter sites or renewals of expired licenses and may not be new frequencies.

Services Represented

GF	Conventional PS-National Plan	PP	Police
GP	Conventional PS & Spc Emerg	PS	Special Emergency
PF	Fire	YA	Trunked PS
PH	Highway Maint.	YF	Trunked PS-National Plan
PL	Local Government	YP	Trunked PS & Special Emerg.
PM	Emergency Medical	IB	Business Radio Service
PO	Forestry Conservation	IW	Power Radio Sevice

by O.E. Simonson

Alabama

BLOUNT, COUNTY OF		PNR11345	151.4000	PP
BLOUNT, COUNTY OF		PNR11345	155.0100	PP
DADEVILLE, CITY OF		PNR11958	153.7700	PF
DADEVILLE, CITY OF		PNR11958	154.2350	PF
ATMORE	ALABAMA, STATE OF	PNR11603	45.9800	PP
ATMORE	ALABAMA, STATE OF	PNR11603	155.0100	PP
BIRMINGHAM	ALABAMA, STATE OF	PND01296	857.9875	GP
BIRMINGHAM	ALABAMA, STATE OF	PND01296	858.4875	GP
BIRMINGHAM	ALABAMA, STATE OF	PND01296	858.9875	GP
BIRMINGHAM	ALABAMA, STATE OF	PND01296	859.9875	GP
CHATOM	WASHINGTON, COUNTY OF	PND01271	153.9050	PP
CHATOM	WASHINGTON, COUNTY OF	PND01271	154.7100	PP
CHATOM	WASHINGTON, COUNTY OF	PND01271	154.8750	PP
CHATOM	WASHINGTON, COUNTY OF	PND01271	155.0100	PP
DADEVILLE	DADEVILLE, CITY OF	PNR11958	154.2350	PF
HOOVER	HOOVER, CITY OF	PNR10572	46.5600	PL
LUVERNE	LUVERNE, CITY OF	PND01275	155.0100	PP
ONEONTA	BLOUNT, COUNTY OF	PNR11345	151.4000	PP
ONEONTA	BLOUNT, COUNTY OF	PNR11345	155.0100	PP
PINCKARD	PINCKARD, TOWN OF	PNR11567	155.0100	PP
SLOCOMB	SLOCOMB, CITY OF	PND01266	154.2650	PF
SOUTHSIDE	SOUTHSIDE, CITY OF	PNA00001	857.2625	GP
SOUTHSIDE	SOUTHSIDE, CITY OF	PNA00001	858.2625	GP
SYLACAUGA	ECLECTIC, TOWN OF	PNA00005	154.4787	PL
SYLACAUGA	SYLACAUGA, CITY OF	PND01177	155.0100	PP
VINEMONT	VINEMONT PROVIDENCE FIRE DEPARTM	PN215308	153.8900	PF
VINEMONT	VINEMONT PROVIDENCE FIRE DEPARTM	PN215308	154.3700	PF

Arkansas

BIGELOW	BIGELOW, CITY OF	PND01525	154.1900	PF
BRYANT	RRYANT, CITY OF	PND02042	155.0550	PL
DARDANELLE	DARDANELLE, CITY OF	PNA00005	153.7400	PL
DARDANELLE	DARDANELLE, CITY OF	PNA00005	155.0250	PL
DECATUR	DECATUR, CITY OF	PNR11655	37.1000	PP
DECATUR	DECATUR, CITY OF	PNR11655	37.1800	PP
DECATUR	DECATUR, CITY OF	PNR11655	37.2000	PP
DECATUR	DECATUR, CITY OF	PNR11655	37.2400	PP
FORREST CI	PALESTINE, CITY OF	PND01514	154.2200	PF
HOT SPRING	SAINT JOSEPHS REGIONAL HEALTH CE	PND01680	150.7900	PM
HOT SPRING	SAINT JOSEPHS REGIONAL HEALTH CE	PND01680	151.3100	PM
MALVERN	MALVERN, CITY OF	PND01653	153.5300	IW
MOUNT IDA	SAINT JOSEPHS REGIONAL HEALTH CE	PND01680	151.3700	PM
PALESTINE	PALESTINE, CITY OF	PND01514	154.2200	PF
ROLAND	LAKE MAUMELLE FIRE DEPARTMENT	PND01681	151.2350	PF
ROLAND	LAKE MAUMELLE FIRE DEPARTMENT	PND01681	151.3250	PF
ROLAND	LAKE MAUMELLE FIRE DEPARTMENT	PND01681	153.8900	PF
ROLAND	LAKE MAUMELLE FIRE DEPARTMENT	PND01681	154.3100	PF
RUSSELLVIL	AUGUSTA, CITY OF	PND02043	39.8200	PL
STRONG	STRONG, CITY OF	PNR11835	37.1000	PL

Arizona

APACHE, COUNTY OF		PND01269	465.3750	PP
MOHAVE, COUNTY OF		PND02014	154.9500	PL

BULLHEAD C	MOHAVE, COUNTY OF	PND02014	154.9500	PL
CLAY SPRIN	CLAY SPRINGS PINEDALE VOLUNTEER	PND02006	153.8300	PF
CLAY SPRIN	CLAY SPRINGS PINEDALE VOLUNTEER	PND02006	154.4000	PF
LAKE HAVAS	LAKE HAVASU, CITY OF	PNA00003	154.7700	PP
LAKE HAVAS	LAKE HAVASU, CITY OF	PNA00003	154.8750	PP
PHOENIX	PHOENIX, CITY OF	PNR11617	153.7700	PF
PHOENIX	PHOENIX, CITY OF	PNR11617	153.8300	PF
PHOENIX	PHOENIX, CITY OF	PNR11617	154.0700	PF
PHOENIX	PHOENIX, CITY OF	PNR11617	154.1450	PF
PHOENIX	PHOENIX, CITY OF	PNR11617	154.1900	PF
PHOENIX	PHOENIX, CITY OF	PNR11617	154.2500	PF
PHOENIX	PHOENIX, CITY OF	PNR11617	154.2800	PF
PHOENIX	PHOENIX, CITY OF	PNR11617	154.3100	PF
SAN SIMON	SAN SIMON, CITY OF	PND01524	154.2200	PF
SAN SIMON	SAN SIMON, CITY OF	PND01524	154.8900	PF
SIERRA VIS	SIERRA VISTA, CITY OF	PNR11417	153.9350	PP
TUCSON	FLOWING WELLS FIRE DISTRICT	PND02004	151.2650	PF
TUCSON	FLOWING WELLS FIRE DISTRICT	PND02004	153.7700	PF
TUCSON	FLOWING WELLS FIRE DISTRICT	PND02004	153.9500	PF
TUCSON	FLOWING WELLS FIRE DISTRICT	PND02004	154.2500	PF
TUCSON	FLOWING WELLS FIRE DISTRICT	PND02004	154.3400	PF

California

	ELK GROVE UNIFIED SCHOOL DISTRIC	PNR11567	866.1625	YF
	ELK GROVE UNIFIED SCHOOL DISTRIC	PNR11567	866.8625	YF
	ELK GROVE UNIFIED SCHOOL DISTRIC	PNR11567	868.3125	YF
	ELK GROVE UNIFIED SCHOOL DISTRIC	PNR11567	868.8500	YF
	PLACER, COUNTY OF	PNR11654	45.1200	PL
	RIVERSIDE, COUNTY OF	PNR11602	44.9200	PS
	RIVERSIDE, COUNTY OF	PNR11602	45.7200	PS
	SAN BERNARDINO, COUNTY OF	PNR11652	44.9200	PS
	SAN BERNARDINO, COUNTY OF	PNR11652	45.7600	PS
	SAN JOSE, CITY OF	PND01269	155.0250	PL
	SAN JOSE, CITY OF	PND02040	465.1500	PP
	SAN JOSE, CITY OF	PND02040	465.2750	PP
	SANTA ANA, CITY OF	PND01600	46.0200	PL
	SANTA CRUZ, COUNTY OF	PND01517	154.1900	PF
	SOLANO, COUNTY OF	PNR11552	461.7875	IB
	SOLANO, COUNTY OF	PNR11552	461.8375	IB
	SOLANO, COUNTY OF	PNR11552	461.9375	IB
	SOLANO, COUNTY OF	PNR11552	462.0625	IB
	SOLANO, COUNTY OF	PNR11552	462.7625	IB
	SOLANO, COUNTY OF	PNR11552	462.8875	IB
	SOLANO, COUNTY OF	PNR11552	463.2625	IB
	SOLANO, COUNTY OF	PNR11552	463.2875	IB
	SOLANO, COUNTY OF	PNR11552	463.4125	IB
	SOLANO, COUNTY OF	PNR11552	463.4875	IB
	SOLANO, COUNTY OF	PNR11552	463.5375	IB
	SOLANO, COUNTY OF	PNR11552	463.8875	IB
	SOLANO, COUNTY OF	PNR11552	464.0125	IB
	SOLANO, COUNTY OF	PNR11552	464.1375	IB
	SOLANO, COUNTY OF	PNR11552	464.3875	IB
	SOLANO, COUNTY OF	PNR11552	464.4375	IB
	SOLANO, COUNTY OF	PNR11552	464.5875	IB
	SOLANO, COUNTY OF	PNR11552	464.6125	IB
	SOLANO, COUNTY OF	PNR11552	464.7625	IB
	SOLANO, COUNTY OF	PNR11552	464.8375	IB
	SOLANO, COUNTY OF	PNR11552	464.8625	IB
	SOLANO, COUNTY OF	PNR11552	464.8875	IB
	SOLANO, COUNTY OF	PNR11552	464.9625	IB
	SOLANO, COUNTY OF	PNR11552	464.9875	IB
	SOLANO, COUNTY OF	PNR11552	465.8875	IB
ANZA	RIVERSIDE, COUNTY OF	PNR11602	46.3200	PS
AUBURN	KYO PO MARKET	PND01909	855.7375	GP
AUBURN	PLACER FOOTHILLS CONSOLIDATED FI	PND01248	154.1750	PF
AUBURN	PLACER FOOTHILLS CONSOLIDATED FI	PND01248	154.2800	PF
AUBURN	PLACER FOOTHILLS CONSOLIDATED FI	PND01248	154.2950	PF
AUBURN	PLACER FOOTHILLS CONSOLIDATED FI	PND01248	154.3550	PF
AUBURN	PLACER, COUNTY OF	PNR11654	39.9800	PL
AUBURN	PLACER, COUNTY OF	PNR11654	45.1200	PL
BAKERSFIEL	CALIFORNIA, STATE OF	PNA00005	153.7550	PL
BAKERSFIEL	CALIFORNIA, STATE OF	PNA00005	154.9800	PL
BEN LOMOND	CALIFORNIA, STATE OF	PNA00004	155.0550	PL
BEVERLY HI	BEVERLY HILLS, CITY OF	PNR11181	868.8375	GF
BIEBER	CALIFORNIA, STATE OF	PND01682	151.2500	PO
BIEBER	CALIFORNIA, STATE OF	PND01682	151.2650	PO
BIG BEAR	SAN BERNARDINO, COUNTY OF	PNR11652	46.2600	PS
BIG BEAR	SAN BERNARDINO, COUNTY OF	PNR11652	46.3200	PS
BOONVILLE	CALIFORNIA, STATE OF	PND02006	151.1450	PO
BORREGO SP	ALAMEDA, COUNTY OF	PND02071	857.1250	GP
BRADLEY	CALIFORNIA, STATE OF	PND01599	153.7550	PL
BURNEY	CALIFORNIA, STATE OF	PND01596	153.7550	PL
CALABASAS	CALABASAS, CITY OF	PND01180	465.1625	PL
CALEXICO	CALIFORNIA, STATE OF	PND02039	42.1800	PP
CALEXICO	CALIFORNIA, STATE OF	PND02039	42.3400	PP
CALEXICO	CALIFORNIA, STATE OF	PND02039	42.6400	PP
CALEXICO	CALIFORNIA, STATE OF	PND02039	42.9200	PP
CALISTOGA	CALIFORNIA, STATE OF	PND01691	855.7125	GP
CALISTOGA	CALIFORNIA, STATE OF	PND01691	855.9625	GP
CAMARILLO	CALIFORNIA, STATE OF	PND01514	33.6600	PF
CAMARILLO	CALIFORNIA, STATE OF	PND01514	33.9800	PF
CAMPBELL	LOS GATOS, TOWN OF	PND01250	484.8625	PP
CAMPBELL	LOS GATOS, TOWN OF	PND01250	487.8625	PP
CARLOTTA	CARLOTTA VOLUNTEER FIRE DEPTME	PNR11348	154.0100	PF
CARMEL	CALIFORNIA, STATE OF	PND01682	151.2650	PO
CISCO GROV	PLACER, COUNTY OF	PNR11654	39.9800	PL

CLEARLAKE	LAKE, COUNTY OF	PNR11553	154.2800	PF
CONCORD	CALIFORNIA STATE UNIVERSITY	PND01255	154.8900	PP
CORONA	CALIFORNIA, STATE OF	PND02006	462.6000	BA
CORONA	CALIFORNIA, STATE OF	PND02006	462.6250	BA
CORONA	CALIFORNIA, STATE OF	PND02006	462.7000	BA
COTATI	SONOMA, COUNTY OF	PND02005	154.1750	PF
COTATI	SONOMA, COUNTY OF	PND02005	154.2800	PF
COTATI	SONOMA, COUNTY OF	PND02005	154.3100	PF
COTATI	SONOMA, COUNTY OF	PND02005	154.4300	PF
DALY CITY	DALY CITY, CITY OF	PND01998	489.6125	PP
DALY CITY	DALY CITY, CITY OF	PND01998	492.6125	PP
DESCANSO	ALAMEDA, COUNTY OF	PND02071	857.1250	GP
DOWNEY	CALIFORNIA, STATE OF	PND01519	33.6600	PF
DOWNEY	CALIFORNIA, STATE OF	PND01519	33.9800	PF
DOWNEY	DOWNEY, CITY OF	PND01136	482.4500	PL
DOWNEY	DOWNEY, CITY OF	PND01136	485.4500	PL
DOWNIEVILL	DOWNIEVILLE FIRE PROTECTION DIST	PNR11565	46.1000	PF
DOWNIEVILL	DOWNIEVILLE FIRE PROTECTION DIST	PNR11565	46.1200	PF
DOWNIEVILL	DOWNIEVILLE FIRE PROTECTION DIST	PNR11565	46.2000	PF
DOWNIEVILL	DOWNIEVILLE FIRE PROTECTION DIST	PNR11565	46.5000	PF
DOWNIEVILL	DOWNIEVILLE FIRE PROTECTION DIST	PNR11565	153.8300	PF
ELK GROVE	ELK GROVE UNIFIED SCHOOL DISTRIC	PNR11567	866.1625	YF
ELK GROVE	ELK GROVE UNIFIED SCHOOL DISTRIC	PNR11567	866.8625	YF
ELK GROVE	ELK GROVE UNIFIED SCHOOL DISTRIC	PNR11567	868.3125	YF
ELK GROVE	ELK GROVE UNIFIED SCHOOL DISTRIC	PNR11567	868.8500	YF
FALLBROOK	SANTA ANA, CITY OF	PND01600	42.1800	PP
FALLBROOK	SANTA ANA, CITY OF	PND01600	42.3400	PP
FALLBROOK	SANTA ANA, CITY OF	PND01600	42.4200	PP
FALLBROOK	SANTA ANA, CITY OF	PND01600	42.8400	PP
FORBESTOWN	CALIFORNIA, STATE OF	PND01298	857.9375	GP
GARDEN GRO	GARDEN GROVE, CITY OF	PND01299	858.3375	GP
GILROY	SANTA CLARA, COUNTY OF	PND01193	856.4375	GP
GILROY	SANTA CLARA, COUNTY OF	PND01193	857.4375	GP
GILROY	SANTA CLARA, COUNTY OF	PND01193	858.4375	GP
GLEN ELLEN	CALIFORNIA, STATE OF	PND01691	855.7125	GP
GLEN ELLEN	CALIFORNIA, STATE OF	PND01691	855.9625	GP
HANFORD	CALIFORNIA, STATE OF	PND01522	33.6600	PF
HANFORD	CALIFORNIA, STATE OF	PND01522	33.9800	PF
HAYWARD	ALAMEDA, COUNTY OF	PND02071	866.4250	YF
HAYWARD	CALIFORNIA STATE UNIVERSITY	PND01255	154.8900	PP
IDYLLWILD	CALIFORNIA, STATE OF	PND01296	868.5375	GF
IMPERIAL	CALIFORNIA, STATE OF	PND01519	33.6600	PF
IMPERIAL	CALIFORNIA, STATE OF	PND01519	33.9800	PF
INDIO	CALIFORNIA, STATE OF	PND01296	868.5375	GF
IRVINE	IRVINE, CITY OF	PNR11183	866.0750	GF
KELSEYVILL	CALIFORNIA, STATE OF	PND01691	855.7125	GP
KELSEYVILL	CALIFORNIA, STATE OF	PND01691	855.9625	GP
KELSEYVILL	LAKE, COUNTY OF	PNR11553	154.1750	PF
KELSEYVILL	LAKE, COUNTY OF	PNR11553	154.2350	PF
KELSEYVILL	LAKE, COUNTY OF	PNR11553	154.2800	PF
KENWOOD	CALIFORNIA, STATE OF	PND01691	855.7125	GP
KENWOOD	CALIFORNIA, STATE OF	PND01691	855.9625	GP
LAKE ELSIN	RIVERSIDE, COUNTY OF	PNR11602	46.2800	PS
LAKEPORT	CALIFORNIA, STATE OF	PND01520	33.6600	PF
LAKEPORT	CALIFORNIA, STATE OF	PND01520	33.9800	PF
LAKEPORT	LAKE, COUNTY OF	PNR11553	154.1750	PF
LAKEPORT	LAKE, COUNTY OF	PNR11553	154.2350	PF
LAKEPORT	LAKE, COUNTY OF	PNR11553	154.2800	PF
LAKEPORT	SMITH, ALAN R	PND01910	855.7125	GP
LEWISTON	CALIFORNIA, STATE OF	PNR11776	47.1000	PH
LIVERMORE	ALAMEDA, COUNTY OF	PND02071	866.4250	YF
LOS ALAMIT	CALIFORNIA, STATE OF	PND02006	462.6000	BA
LOS ALTOS	LOS ALTOS, CITY OF	PNR11863	37.0800	PL
LOS ANGELE	CALIFORNIA, STATE OF	PNA00003	42.4600	PP
LOS ANGELE	CALIFORNIA, STATE OF	PND01272	153.7400	PL
LOS ANGELE	CALIFORNIA, STATE OF	PND01272	154.1000	PL
LOS ANGELE	CALIFORNIA, STATE OF	PND01522	33.6600	PF
LOS ANGELE	CALIFORNIA, STATE OF	PND01522	33.9800	PF
LOS ANGELE	LOS ANGELES, CITY OF	PNR10657	866.1125	YF
LOS ANGELE	LOS ANGELES, CITY OF	PNR10657	866.1375	YF
LOS ANGELE	LOS ANGELES, CITY OF	PNR10657	866.1625	YF
LOS ANGELE	LOS ANGELES, CITY OF	PNR10657	866.1875	YF
LOS ANGELE	LOS ANGELES, CITY OF	PNR10657	866.3375	YF
LOS ANGELE	LOS ANGELES, CITY OF	PNR10657	866.3625	YF
LOS ANGELE	LOS ANGELES, CITY OF	PNR10657	866.3875	YF
LOS ANGELE	LOS ANGELES, CITY OF	PNR10657	866.4125	YF
LOS ANGELE	LOS ANGELES, CITY OF	PNR10657	866.6125	YF
LOS ANGELE	LOS ANGELES, CITY OF	PNR10657	866.6375	YF
LOS ANGELE	LOS ANGELES, CITY OF	PNR10657	866.6625	YF
LOS ANGELE	LOS ANGELES, CITY OF	PNR10657	866.6875	YF
LOS ANGELE	LOS ANGELES, CITY OF	PNR10657	866.8375	YF
LOS ANGELE	LOS ANGELES, CITY OF	PNR10657	866.8625	YF
LOS ANGELE	LOS ANGELES, CITY OF	PNR10657	866.8875	YF
LOS ANGELE	LOS ANGELES, CITY OF	PNR10657	866.9125	YF
LOS ANGELE	LOS ANGELES, CITY OF	PNR10657	867.1125	YF
LOS ANGELE	LOS ANGELES, CITY OF	PNR10657	867.1375	YF
LOS ANGELE	LOS ANGELES, CITY OF	PNR10657	867.1625	YF
LOS ANGELE	LOS ANGELES, CITY OF	PNR10657	867.1875	YF
LOS ANGELE	LOS ANGELES, CITY OF	PNR10657	867.3375	YF
LOS ANGELE	LOS ANGELES, CITY OF	PNR10657	867.3625	YF
LOS ANGELE	LOS ANGELES, CITY OF	PNR10657	867.3875	YF
LOS ANGELE	LOS ANGELES, CITY OF	PNR10657	867.4125	YF
LOS ANGELE	LOS ANGELES, CITY OF	PNR10657	867.6125	YF
LOS ANGELE	LOS ANGELES, CITY OF	PNR10657	867.6375	YF
LOS ANGELE	LOS ANGELES, CITY OF	PNR10657	867.6625	YF
LOS ANGELE	LOS ANGELES, CITY OF	PNR10657	867.6875	YF

LOS ANGELE	LOS ANGELES, CITY OF	PNR10657	867.8375	YF
LOS ANGELE	LOS ANGELES, CITY OF	PNR10657	867.8625	YF
LOS ANGELE	LOS ANGELES, CITY OF	PNR10657	867.8875	YF
LOS ANGELE	LOS ANGELES, CITY OF	PNR10657	867.9125	YF
LOS ANGELE	LOS ANGELES, CITY OF	PNR10657	868.1125	YF
LOS ANGELE	LOS ANGELES, CITY OF	PNR10657	868.1375	YF
LOS ANGELE	LOS ANGELES, CITY OF	PNR10657	868.1625	YF
LOS ANGELE	LOS ANGELES, CITY OF	PNR10657	868.1875	YF
LOS ANGELE	LOS ANGELES, CITY OF	PNR10657	868.3375	YF
LOS ANGELE	LOS ANGELES, CITY OF	PNR10657	868.3625	YF
LOS ANGELE	LOS ANGELES, CITY OF	PNR10657	868.3875	YF
LOS ANGELE	LOS ANGELES, CITY OF	PNR10657	868.4125	YF
LOS ANGELE	LOS ANGELES, CITY OF	PNR10657	868.6875	YF
LOS GATOS	LOS GATOS, TOWN OF	PND01250	484.8625	PP
MADERA	CALIFORNIA, STATE OF	PND01519	33.6600	PF
MADERA	CALIFORNIA, STATE OF	PND01519	33.9800	PF
MARIPOSA	CALIFORNIA, STATE OF	PND01524	33.6600	PF
MARIPOSA	CALIFORNIA, STATE OF	PND01524	33.9800	PF
MARYSVILLE	CALIFORNIA, STATE OF	PND01520	33.6600	PF
MARYSVILLE	CALIFORNIA, STATE OF	PND01520	33.9800	PF
MECCA	ALAMEDA, COUNTY OF	PND02071	857.1250	GP
MERCED	CALIFORNIA, STATE OF	PND01520	33.6600	PF
MERCED	CALIFORNIA, STATE OF	PND01520	33.9800	PF
MERCED	MERCED, CITY OF	PND01194	858.4875	GP
MODESTO	CALIFORNIA, STATE OF	PND01520	33.6600	PF
MODESTO	CALIFORNIA, STATE OF	PND01520	33.9800	PF
MONTECITO	MONTECITO FIRE PROTECTION DIST.	PND01681	154.1900	PF
MONTECITO	MONTECITO FIRE PROTECTION DIST.	ND01681	154.2500	PF
MONTECITO	MONTECITO FIRE PROTECTION DIST.	ND01681	154.2800	PF
MONTECITO	MONTECITO FIRE PROTECTION DIST.	ND01681	154.4450	PF
MONTECITO	MONTECITO FIRE PROTECTION DIST.	ND01681	465.6000	PF
MONTEREY	CALIFORNIA, STATE OF	PND02370	151.4150	PO
MORGAN HIL	SANTA CLARA, COUNTY OF	PND01193	856.4375	GP
MORGAN HIL	SANTA CLARA, COUNTY OF	PND01193	857.4375	GP
MORGAN HIL	SANTA CLARA, COUNTY OF	PND01193	858.4375	GP
MOUNT HAMI	SANTA CLARA, COUNTY OF	PND01193	856.4375	GP
MOUNT HAMI	SANTA CLARA, COUNTY OF	PND01193	857.4375	GP
MOUNT HAMI	SANTA CLARA, COUNTY OF	PND01193	858.4375	GP
NORDEN	CALIFORNIA, STATE OF	PND01599	153.7550	PL
NORTHSTAR	PLACER, COUNTY OF	PNR11654	39.9800	PL
OCEANSIDE	OCEANSIDE, CITY OF	PNR99865	864.1500	GP
OROVILLE	CALIFORNIA, STATE OF	PND01298	857.9375	GP
OROVILLE	CALIFORNIA, STATE OF	PND01513	33.6600	PF
OROVILLE	CALIFORNIA, STATE OF	PND01513	33.9800	PF
PALM SPRIN	CALIFORNIA, STATE OF	PND01296	868.5375	GF
PEBBLE BEA	CALIFORNIA, STATE OF	PND01682	151.2500	PO
PEBBLE BEA	CALIFORNIA, STATE OF	PND01682	151.2650	PO
PEBBLE BEA	CALIFORNIA, STATE OF	PND01682	151.3550	PO
PENNGROVE	SONOMA, COUNTY OF	PND02005	154.1750	PF
PENNGROVE	SONOMA, COUNTY OF	PND02005	154.2800	PF
PENNGROVE	SONOMA, COUNTY OF	PND02005	154.3100	PF
PENNGROVE	SONOMA, COUNTY OF	PND02005	154.4300	PF
PERRIS	CALIFORNIA, STATE OF	PND01514	33.6600	PF
PERRIS	CALIFORNIA, STATE OF	PND01514	33.9800	PF
RANCHO PAL	CALIFORNIA, STATE OF	PNA00005	45.5000	PL
RANCHO PAL	CALIFORNIA, STATE OF	PNA00005	46.4400	PL
RED BLUFF	CALIFORNIA, STATE OF	PND01298	857.9375	GP
RED BLUFF	CALIFORNIA, STATE OF	PND01513	33.6600	PF
RED BLUFF	CALIFORNIA, STATE OF	PND01513	33.9800	PF
RED BLUFF	CALIFORNIA, STATE OF	PND01513	154.3850	PF
REDDING	CALIFORNIA, STATE OF	PND01523	33.6600	PF
REDDING	CALIFORNIA, STATE OF	PND01523	33.9800	PF
REDDING	CALIFORNIA, STATE OF	PND01523	154.1600	PF
REDDING	CALIFORNIA, STATE OF	PND01523	154.2200	PF
REDDING	CALIFORNIA, STATE OF	PND01523	154.2800	PF
RIALTO	SAN BERNARDINO, COUNTY OF	PNR11652	44.9200	PS
RIALTO	SAN BERNARDINO, COUNTY OF	PNR11652	45.7600	PS
ROLLING HI	CALIFORNIA, STATE OF	PNA00005	45.5000	PL
ROLLING HI	LOS ANGELES, CITY OF	PNR10657	866.1125	YF
ROLLING HI	LOS ANGELES, CITY OF	PNR10657	866.1375	YF
ROLLING HI	LOS ANGELES, CITY OF	PNR10657	866.1625	YF
ROLLING HI	LOS ANGELES, CITY OF	PNR10657	866.3875	YF
ROLLING HI	LOS ANGELES, CITY OF	PNR10657	866.4125	YF
ROLLING HI	LOS ANGELES, CITY OF	PNR10657	866.6125	YF
ROLLING HI	LOS ANGELES, CITY OF	PNR10657	866.6375	YF
ROLLING HI	LOS ANGELES, CITY OF	PNR10657	866.6625	YF
ROLLING HI	LOS ANGELES, CITY OF	PNR10657	866.8875	YF
ROLLING HI	LOS ANGELES, CITY OF	PNR10657	866.9125	YF
ROLLING HI	LOS ANGELES, CITY OF	PNR10657	867.1125	YF
ROLLING HI	LOS ANGELES, CITY OF	PNR10657	867.1375	YF
ROLLING HI	LOS ANGELES, CITY OF	PNR10657	867.1625	YF
ROLLING HI	LOS ANGELES, CITY OF	PNR10657	867.3875	YF
ROLLING HI	LOS ANGELES, CITY OF	PNR10657	867.4125	YF
ROLLING HI	LOS ANGELES, CITY OF	PNR10657	867.6125	YF
ROLLING HI	LOS ANGELES, CITY OF	PNR10657	867.6375	YF
ROLLING HI	LOS ANGELES, CITY OF	PNR10657	867.6625	YF
ROLLING HI	LOS ANGELES, CITY OF	PNR10657	867.8875	YF
ROLLING HI	LOS ANGELES, CITY OF	PNR10657	867.9125	YF
ROLLING HI	LOS ANGELES, CITY OF	PNR10657	868.1125	YF
ROLLING HI	LOS ANGELES, CITY OF	PNR10657	868.1375	YF
ROLLING HI	LOS ANGELES, CITY OF	PNR10657	868.1625	YF
ROLLING HI	LOS ANGELES, CITY OF	PNR10657	868.3875	YF
ROLLING HI	LOS ANGELES, CITY OF	PNR10657	868.4125	YF
RUNNING SP	CALIFORNIA, STATE OF	PND02006	462.6000	BA
SACRAMENTO	ELK GROVE UNIFIED SCHOOL DIST.	PNR11567	866.1625	YF
SACRAMENTO	ELK GROVE UNIFIED SCHOOL DIST.	PNR11567	866.8625	YF
SACRAMENTO	ELK GROVE UNIFIED SCHOOL DIST.	PNR11567	868.3125	YF
SACRAMENTO	ELK GROVE UNIFIED SCHOOL DIST.	PNR11567	868.8500	YF
SAN ANDREA	CALIFORNIA, STATE OF	PND01514	33.6600	PF
SAN ANDREA	CALIFORNIA, STATE OF	PND01514	33.9800	PF
SAN BERNAR	SAN BERNARDINO CITY UNIFIED SCH.	PND01597	465.0750	PP
SAN BERNAR	SAN BERNARDINO CITY UNIFIED SCH.	PND01597	465.1500	PP
SAN BERNAR	SAN BERNARDINO, COUNTY OF	PNR11652	44.9200	PS
SAN BERNAR	SAN BERNARDINO, COUNTY OF	PNR11652	45.7600	PS
SAN BERNAR	SAN BERNARDINO, COUNTY OF	PNR11652	46.2600	PS
SAN BERNAR	SAN BERNARDINO, COUNTY OF	PNR11652	46.3200	PS
SAN CARLOS	SOUTH COUNTY FIRE AUTHORITY	PND02004	153.8300	PF
SAN CARLOS	SOUTH COUNTY FIRE AUTHORITY	PND02004	153.8900	PF
SAN CARLOS	SOUTH COUNTY FIRE AUTHORITY	PND02004	154.2650	PF
SAN CARLOS	SOUTH COUNTY FIRE AUTHORITY	PND02004	154.2800	PF
SAN CARLOS	SOUTH COUNTY FIRE AUTHORITY	PND02004	154.2950	PF
SAN CARLOS	SOUTH COUNTY FIRE AUTHORITY	PND02004	154.3700	PF
SAN JACINT	CALIFORNIA, STATE OF	PND01296	868.5375	GF
SAN JOSE	SAN JOSE, CITY OF	PND01269	155.0250	PL
SAN JOSE	SAN JOSE, CITY OF	PND02040	465.1500	PP
SAN JOSE	SAN JOSE, CITY OF	PND02040	465.2750	PP
SAN JOSE	SANTA CLARA, COUNTY OF	PND01193	856.4375	GP
SAN JOSE	SANTA CLARA, COUNTY OF	PND01193	857.4375	GP
SAN LUIS O	CALIFORNIA, STATE OF	PND01519	33.6600	PF
SAN LUIS O	CALIFORNIA, STATE OF	PND01519	33.9800	PF
SAN YSIDRO	CALIFORNIA, STATE OF	PND02039	42.1800	PP
SAN YSIDRO	CALIFORNIA, STATE OF	PND02039	42.3400	PP
SAN YSIDRO	CALIFORNIA, STATE OF	PND02039	42.6600	PP
SAN YSIDRO	CALIFORNIA, STATE OF	PND02039	42.8800	PP
SANTA ANA	SANTA ANA, CITY OF	PND01600	46.0200	PL
SANTA BARB	CALIFORNIA, STATE OF	PND01514	33.6600	PF
SANTA BARB	CALIFORNIA, STATE OF	PND01514	33.9800	PF
SANTA ROSA	CALIFORNIA, STATE OF	PND01691	855.7125	GP
SANTA ROSA	CALIFORNIA, STATE OF	PND01691	855.9625	GP
SANTIAGO P	GARDEN GROVE, CITY OF	PND01299	858.3375	GP
SARATOGA	SANTA CLARA, COUNTY OF	PND01193	856.4375	GP
SARATOGA	SANTA CLARA, COUNTY OF	PND01193	857.4375	GP
SARATOGA	SANTA CLARA, COUNTY OF	PND01193	858.4375	GP
SCOTTS VAL	SANTA CRUZ, COUNTY OF	PND01517	154.1900	PF
SONOMA	CALIFORNIA, STATE OF	PND01691	855.7125	GP
SONOMA	CALIFORNIA, STATE OF	PND01691	855.9625	GP
SOUTH LAKE	CALIFORNIA, STATE OF	PNA00004	859.9375	GP
STOCKTON	CALIFORNIA, STATE OF	PNR11776	39.0200	PP
STOCKTON	CALIFORNIA, STATE OF	PNR11776	39.1000	PP
SUNOL	ALAMEDA, COUNTY OF	PND02071	866.4250	YF
SUTTER	CALIFORNIA, STATE OF	PND01298	857.9375	GP
TAHOE CITY	CALIFORNIA, STATE OF	PND01519	33.6600	PF
TAHOE CITY	CALIFORNIA, STATE OF	PND01519	33.9800	PF
TAHOE CITY	PLACER, COUNTY OF	PNR11654	45.1200	PL
TAHOMA	CALIFORNIA, STATE OF	PNA00004	859.9375	GP
TEHACHAPI	CALIFORNIA, STATE OF	PND01271	39.1000	PP
TEMECULA	SANTA ANA, CITY OF	PND01600	42.1800	PP
TEMECULA	SANTA ANA, CITY OF	PND01600	42.3400	PP
TEMECULA	SANTA ANA, CITY OF	PND01600	42.4200	PP
TEMECULA	SANTA ANA, CITY OF	PND01600	42.8400	PP
VALLEJO	VALLEJO, CITY OF	PND02032	154.4787	IW
VAN NUYS	LOS ANGELES, CITY OF	PNR11861	487.4875	PP
VAN NUYS	LOS ANGELES, CITY OF	PNR11861	487.5125	PP
VIRGILIA	CALIFORNIA, STATE OF	PNR11776	47.1000	PH
VISALIA	CALIFORNIA, STATE OF	PND01518	33.6600	PF
VISALIA	CALIFORNIA, STATE OF	PND01518	33.9800	PF
WEST SACRA	CALIFORNIA, STATE OF	PND01518	151.2050	PO
WEST SACRA	CALIFORNIA, STATE OF	PND01518	151.2350	PO
WHITTIER	CALIFORNIA, STATE OF	PND02006	462.6000	BA
WILLITS	CALIFORNIA, STATE OF	PND02006	151.1450	PO
WILLITS	CALIFORNIA, STATE OF	PND02006	151.2650	PO
WILLITS	CALIFORNIA, STATE OF	PND02006	151.3550	PO
WILLITS	CALIFORNIA, STATE OF	PND02006	151.3850	PO
WINTERHAVE	ALAMEDA, COUNTY OF	PND02071	857.1250	GP
YUBA CITY	CALIFORNIA, STATE OF	PND01522	33.6600	PF
YUBA CITY	CALIFORNIA, STATE OF	PND01522	33.9800	PF
YUCAIPA	CALIFORNIA, STATE OF	PND01525	154.2800	PF

Colorado

	ADAMS, COUNTY OF	PNR10725	46.4800	PF
	ADAMS, COUNTY OF	PNR10725	47.3400	PF
	PIKES PEAK LIBRARY DISTRICT	PND01254	155.0550	PL
AKRON	AKRON, TOWN OF	PND01267	154.4562	PL
AVON	EAGLE, COUNTY OF	PND01607	856.7625	YP
AVON	EAGLE, COUNTY OF	PND01607	856.9378	YP
AVON	EAGLE, COUNTY OF	PND01607	856.9875	YP
AVON	EAGLE, COUNTY OF	PND01607	857.7625	YP
AVON	EAGLE, COUNTY OF	PND01607	857.9375	YP
AVON	EAGLE, COUNTY OF	PND01607	857.9625	YP
AVON	EAGLE, COUNTY OF	PND01607	857.9875	YP
AVON	EAGLE, COUNTY OF	PND01607	858.7625	YP
AVON	EAGLE, COUNTY OF	PND01607	858.9375	YP
AVON	EAGLE, COUNTY OF	PND01607	858.9625	YP
AVON	EAGLE, COUNTY OF	PND01607	858.9875	YP
AVON	EAGLE, COUNTY OF	PND01607	859.7625	YP
AVON	EAGLE, COUNTY OF	PND01607	859.9375	YP
AVON	EAGLE, COUNTY OF	PND01607	859.9625	YP
AVON	EAGLE, COUNTY OF	PND01607	859.9875	YP
AVON	EAGLE, COUNTY OF	PND01607	860.7625	YP
AVON	EAGLE, COUNTY OF	PND01607	860.9375	YP
AVON	EAGLE, COUNTY OF	PND01607	860.9625	YP
AVON	EAGLE, COUNTY OF	PND01607	860.9875	YP

BOND	EAGLE, COUNTY OF	PND01607	856.7625	YP
BOND	EAGLE, COUNTY OF	PND01607	857.7625	YP
BOND	EAGLE, COUNTY OF	PND01607	858.7625	YP
BOND	EAGLE, COUNTY OF	PND01607	859.7625	YP
BOND	EAGLE, COUNTY OF	PND01607	860.7625	YP
BOULDER	COLORADO, STATE OF	PND01255	154.8900	PP
BRIGHTON	ADAMS, COUNTY OF	PNR10725	465.5250	PF
BRIGHTON	ADAMS, COUNTY OF	PNR10725	465.5500	PF
BRIGHTON	ADAMS, COUNTY OF	PNR10725	465.5750	PF
CALHAN	PIKES PEAK LIBRARY DISTRICT	PND01254	155.0550	PL
COLORADO S	PIKES PEAK LIBRARY DISTRICT	PND01254	155.0550	PL
COMMERCE C	ADAMS, COUNTY OF	PNR10725	46.4800	PF
COMMERCE C	ADAMS, COUNTY OF	PNR10725	47.3400	PF
CRIPPLE CR	TELLER, COUNTY OF	PND02043	154.7100	PP
DENVER	ADAMS, COUNTY OF	PNR10725	465.5250	PF
DENVER	ADAMS, COUNTY OF	PNR10725	465.5500	PF
DENVER	ADAMS, COUNTY OF	PNR10725	465.5750	PF
DILLON	COLORADO, STATE OF	PNR11902	151.0850	PH
DIVIDE	TELLER, COUNTY OF	PND02043	154.7100	PP
EAGLE	EAGLE, COUNTY OF	PND01607	856.9375	YP
EAGLE	EAGLE, COUNTY OF	PND01607	857.9375	YP
EAGLE	EAGLE, COUNTY OF	PND01607	858.9375	YP
EAGLE	EAGLE, COUNTY OF	PND01607	859.9375	YP
EAGLE	EAGLE, COUNTY OF	PND01607	860.9375	YP
FORT COLLI	POUDRE FIRE AUTHORITY	PND01515	465.6000	PF
FORT COLLI	POUDRE FIRE AUTHORITY	PND01515	465.6250	PF
FRANKTOWN	COLORADO, STATE OF	PND01682	151.4000	PO
FRANKTOWN	COLORADO, STATE OF	PND01682	151.4150	PO
FRANKTOWN	COLORADO, STATE OF	PNR11902	151.0850	PH
GLENWOOD S	EAGLE, COUNTY OF	PND01607	856.7625	YP
GLENWOOD S	EAGLE, COUNTY OF	PND01607	857.7625	YP
GLENWOOD S	EAGLE, COUNTY OF	PND01607	858.7625	YP
GRAND JUNC	COLORADO, STATE OF	PND01965	151.0850	PH
GYPSUM	EAGLE, COUNTY OF	PND01607	858.9625	YP
GYPSUM	EAGLE, COUNTY OF	PND01607	859.9625	YP
GYPSUM	EAGLE, COUNTY OF	PND01607	860.9625	YP
IDAHO SPRI	COLORADO, STATE OF	PNR11902	151.0850	PH
LAKEWOOD	COLORADO, STATE OF	PND01682	151.1600	PO
LITTLETON	COLORADO, STATE OF	PND01682	151.1600	PO
LOVELAND	POUDRE FIRE AUTHORITY	PND01515	465.6000	PF
LOVELAND	POUDRE FIRE AUTHORITY	PND01515	465.6250	PF
MANITOU SP	COLORADO, STATE OF	PND02037	155.1000	PL
MONTROSE	COLORADO, STATE OF	PND02037	462.5000	PL
MONTROSE	MONTROSE, COUNTY OF	PN215455	153.8150	PP
MONUMENT	WOODMOOR MONUMENT FIRE	PND01517	154.3550	PF
NORTHGLENN	ADAMS, COUNTY OF	PNR10725	46.4800	PF
NUCLA	MONTROSE, COUNTY OF	PN215455	153.8150	PP
PAONIA	COLORADO, STATE OF	PND01965	151.0850	PH
RED CLIFF	EAGLE, COUNTY OF	PND01607	858.7625	YP
RED CLIFF	EAGLE, COUNTY OF	PND01607	859.7625	YP
RED CLIFF	EAGLE, COUNTY OF	PND01607	860.7625	YP
RUSH	PIKES PEAK LIBRARY DISTRICT	PND01254	155.0550	PL
SILVERPLUM	COLORADO, STATE OF	PNR11902	151.0850	PH
VAIL	EAGLE, COUNTY OF	PND01607	857.9625	YP
VAIL	EAGLE, COUNTY OF	PND01607	858.9625	YP
VAIL	EAGLE, COUNTY OF	PND01607	859.9625	YP
VAIL	EAGLE, COUNTY OF	PND01607	860.9625	YP
WONDERVUE	ADAMS, COUNTY OF	PNR10725	46.4800	PF

Connecticut

DANBURY	LAIDLAW TRANSIT INC	PND01175	37.9800	PS
GROTON	GROTON, CITY OF	PND00617	155.0700	PP
GROTON	GROTON, CITY OF	PND00617	155.1300	PP
MANCHESTER	MANCHESTER, TOWN OF	PNR11566	33.9400	PF
MANCHESTER	MANCHESTER, TOWN OF	PNR11566	153.8900	PF
MANCHESTER	MANCHESTER, TOWN OF	PNR11566	154.2650	PF
MANCHESTER	MANCHESTER, TOWN OF	PNR11566	154.3550	PF
MANCHESTER	MANCHESTER, TOWN OF	PNR11566	154.4150	PF
MERIDEN	HUNTERS AMBULANCE INC	PND01698	33.0800	PS
TORRINGTON	TORRINGTON, CITY OF	PND00165	856.7375	GP
TORRINGTON	TORRINGTON, CITY OF	PND00165	857.7625	GP
WEST HAVEN	FIRE DISTRICTS OF WEST HAVEN	PND01248	46.5000	PF
WESTON	WESTON, TOWN OF	PNR11215	45.3400	PP
WOODBURY	WOODBURY, TOWN OF	PND01277	45.9000	PP

Delaware

	SUSSEX, COUNTY OF	PND01681	154.0100	PF

Florida

	COLLIER, COUNTY OF	PND01296	856.7625	YP
	COLLIER, COUNTY OF	PND01296	857.7625	YP
	COLLIER, COUNTY OF	PND01296	858.7625	YP
	DAYTONA BEACH, CITY OF	PND02071	866.0125	GF
	DAYTONA BEACH, CITY OF	PND02071	866.1000	YF
	DAYTONA BEACH, CITY OF	PND02071	866.3500	YF
	DAYTONA BEACH, CITY OF	PND02071	866.6000	YF
	DAYTONA BEACH, CITY OF	PND02071	866.8375	YF
	DAYTONA BEACH, CITY OF	PND02071	867.0125	GF
	DAYTONA BEACH, CITY OF	PND02071	867.0875	YF
	DAYTONA BEACH, CITY OF	PND02071	867.3375	YF
	DAYTONA BEACH, CITY OF	PND02071	867.5125	GF
	DAYTONA BEACH, CITY OF	PND02071	867.5875	YF
	DAYTONA BEACH, CITY OF	PND02071	868.0125	GF
	DAYTONA BEACH, CITY OF	PND02071	868.0750	YF
	DAYTONA BEACH, CITY OF	PND02071	868.3250	YF
	DAYTONA BEACH, CITY OF	PND02071	868.5750	YF
	DAYTONA BEACH, CITY OF	PND02071	868.8250	YF
	FORT LAUDERDALE, CITY OF	PND01266	462.9500	PM
	FORT LAUDERDALE, CITY OF	PND01266	462.9750	PM
	FORT LAUDERDALE, CITY OF	PND01266	463.0000	PM
	FORT LAUDERDALE, CITY OF	PND01266	463.0250	PM
	FORT LAUDERDALE, CITY OF	PND01266	463.0500	PM
	FORT LAUDERDALE, CITY OF	PND01266	463.0750	PM
	FORT LAUDERDALE, CITY OF	PND01266	463.1000	PM
	FORT LAUDERDALE, CITY OF	PND01266	463.1250	PM
	FORT LAUDERDALE, CITY OF	PND01266	463.1500	PM
	FORT LAUDERDALE, CITY OF	PND01266	463.1750	PM
	JACKSON, COUNTY OF	PNR11433	37.9800	PS
	PLANTATION, CITY OF	PND01525	462.9500	PM
	PLANTATION, CITY OF	PND01525	462.9750	PM
	PLANTATION, CITY OF	PND01525	463.0000	PM
	PLANTATION, CITY OF	PND01525	463.0250	PM
	PLANTATION, CITY OF	PND01525	463.0500	PM
	PLANTATION, CITY OF	PND01525	463.0750	PM
	PLANTATION, CITY OF	PND01525	463.1000	PM
	PLANTATION, CITY OF	PND01525	463.1250	PM
	PLANTATION, CITY OF	PND01525	463.1500	PM
	PLANTATION, CITY OF	PND01525	463.1750	PM
	PUTNAM, COUNTY OF	PND01679	33.8600	PF
	PUTNAM, COUNTY OF	PND01679	154.1900	PF
	PUTNAM, COUNTY OF	PND01679	154.2650	PF
	PUTNAM, COUNTY OF	PND01679	154.2800	PF
	PUTNAM, COUNTY OF	PND01679	154.2950	PF
	PUTNAM, COUNTY OF	PND01679	154.3550	PF
	PUTNAM, COUNTY OF	PND01679	465.6125	PF
ALFORD	JACKSON, COUNTY OF	PNR11433	37.9800	PS
BLOXHAM	TALLAHASSEE, CITY OF	PND01429	855.9625	YP
BLOXHAM	TALLAHASSEE, CITY OF	PND01429	856.4625	YP
BLOXHAM	TALLAHASSEE, CITY OF	PND01429	856.7125	YP
BLOXHAM	TALLAHASSEE, CITY OF	PND01429	856.9625	YP
BLOXHAM	TALLAHASSEE, CITY OF	PND01429	857.2125	YP
BLOXHAM	TALLAHASSEE, CITY OF	PND01429	857.4625	YP
BLOXHAM	TALLAHASSEE, CITY OF	PND01429	857.7125	YP
BLOXHAM	TALLAHASSEE, CITY OF	PND01429	857.9625	YP
BLOXHAM	TALLAHASSEE, CITY OF	PND01429	858.2125	YP
BLOXHAM	TALLAHASSEE, CITY OF	PND01429	858.4625	YP
BLOXHAM	TALLAHASSEE, CITY OF	PND01429	858.7125	YP
BLOXHAM	TALLAHASSEE, CITY OF	PND01429	858.9625	YP
BLOXHAM	TALLAHASSEE, CITY OF	PND01429	859.2125	YP
BLOXHAM	TALLAHASSEE, CITY OF	PND01429	859.4625	YP
BLOXHAM	TALLAHASSEE, CITY OF	PND01429	859.7125	YP
BLOXHAM	TALLAHASSEE, CITY OF	PND01429	859.9625	YP
BLOXHAM	TALLAHASSEE, CITY OF	PND01429	860.2125	YP
BLOXHAM	TALLAHASSEE, CITY OF	PND01429	860.4625	YP
BLOXHAM	TALLAHASSEE, CITY OF	PND01429	860.7125	YP
BLOXHAM	TALLAHASSEE, CITY OF	PND01429	860.9625	YP
CAMPBELLTO	JACKSON, COUNTY OF	PNR11433	37.9800	PS
COCOA	FLORIDA, STATE OF	PND01270	154.6800	PP
COCOA	FLORIDA, STATE OF	PND01270	154.9200	PP
DAYTONA BE	DAYTONA BEACH, CITY OF	PND02071	866.1000	YF
DAYTONA BE	DAYTONA BEACH, CITY OF	PND02071	866.3500	YF
DAYTONA BE	DAYTONA BEACH, CITY OF	PND02071	866.6000	YF
DAYTONA BE	DAYTONA BEACH, CITY OF	PND02071	866.8375	YF
DAYTONA BE	DAYTONA BEACH, CITY OF	PND02071	867.0875	YF
DAYTONA BE	DAYTONA BEACH, CITY OF	PND02071	867.3375	YF
DAYTONA BE	DAYTONA BEACH, CITY OF	PND02071	867.5875	YF
DAYTONA BE	DAYTONA BEACH, CITY OF	PND02071	868.0750	YF
DAYTONA BE	DAYTONA BEACH, CITY OF	PND02071	868.3250	YF
DAYTONA BE	DAYTONA BEACH, CITY OF	PND02071	868.5750	YF
DAYTONA BE	DAYTONA BEACH, CITY OF	PND02071	868.8250	YF
EAST PALAT	FLORIDA, STATE OF	PND02040	154.6950	PP
EAST PALAT	FLORIDA, STATE OF	PND02040	154.9200	PP
EGLIN AFB	FLORIDA, STATE OF	PND01172	45.4000	PL
FORT MYERS	AMERICAN NATIONAL RED CROSS	PN266264	47.4200	PS
FORT MYERS	AMERICAN NATIONAL RED CROSS	PN266279	47.4200	PS
FORT MYERS	AMERICAN NATIONAL RED CROSS	PNR11751	47.4200	PS
GRACEVILLE	JACKSON, COUNTY OF	PNR11433	37.9800	PS
GREEN COVE	FLORIDA, STATE OF	PND02040	154.6950	PP
JACKSONVIL	ST VINCENTS MEDICAL CENTER	PND01248	463.0000	PM
JACKSONVIL	ST VINCENTS MEDICAL CENTER	PND01248	463.0500	PM
JACKSONVIL	ST VINCENTS MEDICAL CENTER	PND01248	463.0750	PM
JACKSONVIL	ST VINCENTS MEDICAL CENTER	PND01248	463.1000	PM
JACKSONVIL	ST VINCENTS MEDICAL CENTER	PND01248	463.1250	PM
JACKSONVIL	ST VINCENTS MEDICAL CENTER	PND01248	463.1500	PM
JACKSONVIL	ST VINCENTS MEDICAL CENTER	PND01248	463.1750	PM
JACKSONVIL	ST VINCENTS MEDICAL CENTER	PND01248	463.2500	PM
LABELLE	HENDRY, COUNTY OF	PND02043	154.7850	PP
LARGO	FLORIDA, STATE OF	PND01270	154.6650	PP
MARIANNA	JACKSON, COUNTY OF	PNR11433	37.9800	PS
MELROSE	PUTNAM, COUNTY OF	PND01679	154.1900	PF
MELROSE	PUTNAM, COUNTY OF	PND01679	154.2800	PF
MELROSE	PUTNAM, COUNTY OF	PND01679	154.2950	PF
MICCOSUKEE	TALLAHASSEE, CITY OF	PND01429	855.9625	YP
MICCOSUKEE	TALLAHASSEE, CITY OF	PND01429	856.4625	YP
MICCOSUKEE	TALLAHASSEE, CITY OF	PND01429	856.7125	YP
MICCOSUKEE	TALLAHASSEE, CITY OF	PND01429	856.9625	YP
MICCOSUKEE	TALLAHASSEE, CITY OF	PND01429	857.2125	YP
MICCOSUKEE	TALLAHASSEE, CITY OF	PND01429	857.4625	YP
MICCOSUKEE	TALLAHASSEE, CITY OF	PND01429	857.7125	YP
MICCOSUKEE	TALLAHASSEE, CITY OF	PND01429	857.9625	YP
MICCOSUKEE	TALLAHASSEE, CITY OF	PND01429	858.2125	YP

MICCOSUKEE	TALLAHASSEE, CITY OF	PND01429	858.4625	YP
MICCOSUKEE	TALLAHASSEE, CITY OF	PND01429	858.7125	YP
MICCOSUKEE	TALLAHASSEE, CITY OF	PND01429	858.9625	YP
MICCOSUKEE	TALLAHASSEE, CITY OF	PND01429	859.2125	YP
MICCOSUKEE	TALLAHASSEE, CITY OF	PND01429	859.4625	YP
MICCOSUKEE	TALLAHASSEE, CITY OF	PND01429	859.7125	YP
MICCOSUKEE	TALLAHASSEE, CITY OF	PND01429	859.9625	YP
MICCOSUKEE	TALLAHASSEE, CITY OF	PND01429	860.2125	YP
MICCOSUKEE	TALLAHASSEE, CITY OF	PND01429	860.4625	YP
MICCOSUKEE	TALLAHASSEE, CITY OF	PND01429	860.7125	YP
MICCOSUKEE	TALLAHASSEE, CITY OF	PND01429	860.9625	YP
MIDDLEBURG	FLORIDA, STATE OF	PND02040	154.6950	PP
OCHOPEE	COLLIER, COUNTY OF	PND01296	856.7625	YP
OCHOPEE	COLLIER, COUNTY OF	PND01296	857.7625	YP
OCHOPEE	COLLIER, COUNTY OF	PND01296	858.7625	YP
PALATKA	PUTNAM, COUNTY OF	PND01679	33.8600	PF
PALATKA	PUTNAM, COUNTY OF	PND01679	154.1900	PF
PALM BAY	FLORIDA, STATE OF	PND01270	154.6800	PP
PALM BAY	FLORIDA, STATE OF	PND01270	154.9200	PP
PANAMA CIT	PANAMA CITY BEACH, CITY OF	PN215712	154.4562	PL
PANAMA CIT	PANAMA CITY BEACH, CITY OF	PN215712	155.1150	PL
PINELLAS P	FLORIDA, STATE OF	PND01270	154.6650	PP
PINELLAS P	FLORIDA, STATE OF	PND01270	154.9200	PP
SAINT MARK	TALLAHASSEE, CITY OF	PND01429	855.9625	YP
SAINT MARK	TALLAHASSEE, CITY OF	PND01429	856.4625	YP
SAINT MARK	TALLAHASSEE, CITY OF	PND01429	856.7125	YP
SAINT MARK	TALLAHASSEE, CITY OF	PND01429	856.9625	YP
SAINT MARK	TALLAHASSEE, CITY OF	PND01429	857.2125	YP
SAINT MARK	TALLAHASSEE, CITY OF	PND01429	857.4625	YP
SAINT MARK	TALLAHASSEE, CITY OF	PND01429	857.7125	YP
SAINT MARK	TALLAHASSEE, CITY OF	PND01429	857.9625	YP
SAINT MARK	TALLAHASSEE, CITY OF	PND01429	858.2125	YP
SAINT MARK	TALLAHASSEE, CITY OF	PND01429	858.4625	YP
SAINT MARK	TALLAHASSEE, CITY OF	PND01429	858.7125	YP
SAINT MARK	TALLAHASSEE, CITY OF	PND01429	858.9625	YP
SAINT MARK	TALLAHASSEE, CITY OF	PND01429	859.2125	YP
SAINT MARK	TALLAHASSEE, CITY OF	PND01429	859.4625	YP
SAINT MARK	TALLAHASSEE, CITY OF	PND01429	859.7125	YP
SAINT MARK	TALLAHASSEE, CITY OF	PND01429	859.9625	YP
SAINT MARK	TALLAHASSEE, CITY OF	PND01429	860.2125	YP
SAINT MARK	TALLAHASSEE, CITY OF	PND01429	860.4625	YP
SAINT MARK	TALLAHASSEE, CITY OF	PND01429	860.7125	YP
SAINT MARK	TALLAHASSEE, CITY OF	PND01429	860.9625	YP
SAN MATEO	PUTNAM, COUNTY OF	PND01679	154.1900	PF
SAN MATEO	PUTNAM, COUNTY OF	PND01679	154.2800	PF
SAN MATEO	PUTNAM, COUNTY OF	PND01679	154.2950	PF
SARASOTA	AMERICAN NATIONAL RED CROSS	PN009156	47.4200	PS
SNEADS	JACKSON, COUNTY OF	PNR11433	37.9800	PS
STUART	FLORIDA, STATE OF	PND01598	44.8000	PO
STUART	FLORIDA, STATE OF	PND01598	44.9600	PO
STUART	FLORIDA, STATE OF	PND01598	45.0000	PO
TALLAHASSE	TALLAHASSEE, CITY OF	PND01429	851.0000	YP
TALLAHASSE	TALLAHASSEE, CITY OF	PND01429	855.9625	YP
TALLAHASSE	TALLAHASSEE, CITY OF	PND01429	856.4625	YP
TALLAHASSE	TALLAHASSEE, CITY OF	PND01429	856.7125	YP
TALLAHASSE	TALLAHASSEE, CITY OF	PND01429	856.9625	YP
TALLAHASSE	TALLAHASSEE, CITY OF	PND01429	857.2125	YP
TALLAHASSE	TALLAHASSEE, CITY OF	PND01429	857.4625	YP
TALLAHASSE	TALLAHASSEE, CITY OF	PND01429	857.7125	YP
TALLAHASSE	TALLAHASSEE, CITY OF	PND01429	857.9625	YP
TALLAHASSE	TALLAHASSEE, CITY OF	PND01429	858.2125	YP
TALLAHASSE	TALLAHASSEE, CITY OF	PND01429	858.4625	YP
TALLAHASSE	TALLAHASSEE, CITY OF	PND01429	858.7125	YP
TALLAHASSE	TALLAHASSEE, CITY OF	PND01429	858.9625	YP
TALLAHASSE	TALLAHASSEE, CITY OF	PND01429	859.2125	YP
TALLAHASSE	TALLAHASSEE, CITY OF	PND01429	859.4625	YP
TALLAHASSE	TALLAHASSEE, CITY OF	PND01429	859.7125	YP
TALLAHASSE	TALLAHASSEE, CITY OF	PND01429	859.9625	YP
TALLAHASSE	TALLAHASSEE, CITY OF	PND01429	860.2125	YP
TALLAHASSE	TALLAHASSEE, CITY OF	PND01429	860.4625	YP
TALLAHASSE	TALLAHASSEE, CITY OF	PND01429	860.7125	YP
TALLAHASSE	TALLAHASSEE, CITY OF	PND01429	860.9625	YP
TARPON SPR	FLORIDA, STATE OF	PND01270	154.6650	PP
TARPON SPR	FLORIDA, STATE OF	PND01270	154.9200	PP
TITUSVILLE	FLORIDA, STATE OF	PND01270	154.6800	PP
TITUSVILLE	FLORIDA, STATE OF	PND01270	154.9200	PP

Georgia

	BURKE, COUNTY OF	PNR11894	45.1600	PL
	CHEROKEE, COUNTY OF	PND01277	154.9500	PP
ATLANTA	ATLANTA, CITY OF	PND01297	866.0125	YF
ATLANTA	ATLANTA, CITY OF	PND01297	866.0625	YF
ATLANTA	ATLANTA, CITY OF	PND01297	866.3125	YF
ATLANTA	ATLANTA, CITY OF	PND01297	866.5125	YF
ATLANTA	ATLANTA, CITY OF	PND01297	866.5375	YF
ATLANTA	ATLANTA, CITY OF	PND01297	866.8625	YF
ATLANTA	ATLANTA, CITY OF	PND01297	867.0125	YF
ATLANTA	ATLANTA, CITY OF	PND01297	867.0625	YF
ATLANTA	ATLANTA, CITY OF	PND01297	867.1875	YF
ATLANTA	ATLANTA, CITY OF	PND01297	867.3125	YF
ATLANTA	ATLANTA, CITY OF	PND01297	867.4625	YF
ATLANTA	ATLANTA, CITY OF	PND01297	867.5125	YF
ATLANTA	ATLANTA, CITY OF	PND01297	868.0125	YF
ATLANTA	GEORGIA, STATE OF	PND01597	154.9050	PP
ATLANTA	GEORGIA, STATE OF	PND01597	154.9350	PP
ATLANTA	GEORGIA, STATE OF	PND02042	153.9350	PL
BAINBRIDGE	BAINBRIDGE, CITY OF	PND01275	154.9050	PP
BAINBRIDGE	BAINBRIDGE, CITY OF	PND01275	154.9350	PP
BAINBRIDGE	BAINBRIDGE, CITY OF	PND01275	155.0100	PP
COLLEGE PA	SENOIA, CITY OF	PND02043	154.9050	PP
COLLEGE PA	SENOIA, CITY OF	PND02043	154.9350	PP
DUBLIN	DUBLIN, CITY OF	PNR11433	463.8000	IB
DUBLIN	GEORGIA, STATE OF	PND02042	151.1600	PP
HAPEVILLE	HAPEVILLE, CITY OF	PND01293	153.9800	PF
HAPEVILLE	HAPEVILLE, CITY OF	PND01293	154.2800	PF
HAPEVILLE	HAPEVILLE, CITY OF	PND01293	154.3550	PF
JASPER	JASPER, CITY OF	PNR11638	154.0700	PF
JASPER	JASPER, CITY OF	PNR11638	154.2800	PF
MARIETTA	GEORGIA, STATE OF	PND01597	154.9050	PP
MARIETTA	GEORGIA, STATE OF	PND01597	154.9350	PP
MARIETTA	GEORGIA, STATE OF	PND02042	153.9350	PL
PORTAL	GEORGIA, STATE OF	PND01597	154.0400	PL
SAVANNAH	COASTAL GEORGIA AMBULANCE SVIC	PNR10853	462.9500	PS
SAVANNAH	COASTAL GEORGIA AMBULANCE SVIC	PNR10853	463.0000	PS
SAVANNAH	COASTAL GEORGIA AMBULANCE SVIC	PNR10853	463.0250	PS
SAVANNAH	COASTAL GEORGIA AMBULANCE SVIC	PNR10853	463.0500	PS
SAVANNAH	COASTAL GEORGIA AMBULANCE SVIC	PNR10853	463.0750	PS
SAVANNAH	COASTAL GEORGIA AMBULANCE SVIC	PNR10853	463.1000	PS
SAVANNAH	COASTAL GEORGIA AMBULANCE SVIC	PNR10853	463.1250	PS
SAVANNAH	COASTAL GEORGIA AMBULANCE SVIC	PNR10853	463.1500	PS
SAVANNAH	COASTAL GEORGIA AMBULANCE SVIC	PNR10853	463.1750	PS
SENOIA	SENOIA, CITY OF	PND02043	154.9050	PP
SENOIA	SENOIA, CITY OF	PND02043	154.9350	PP
STATESBORO	STATESBORO, CITY OF	PNR11960	154.7100	PP
STATESBORO	STATESBORO, CITY OF	PNR11960	154.7400	PP
STATESBORO	STATESBORO, CITY OF	PNR11960	154.9050	PP
STATESBORO	STATESBORO, CITY OF	PNR11960	154.9350	PP
VIENNA	DUBLIN, CITY OF	PNR11433	463.8000	IB
WAYCROSS	WARE, COUNTY OF	PND01516	154.0100	PF
WAYCROSS	WARE, COUNTY OF	PND01516	154.4450	PF
WAYNESBORO	BURKE, COUNTY OF	PNR11894	45.1600	PL

Hawaii

	HONOLULU, CITY & COUNTY OF	PND01299	866.0125	GF
	HONOLULU, CITY & COUNTY OF	PND01299	866.4875	GF
HONOLULU	HONOLULU, CITY & COUNTY OF	PND01299	866.0125	GF
HONOLULU	HONOLULU, CITY & COUNTY OF	PND01299	866.4875	GF
KAAAWA	HONOLULU, CITY & COUNTY OF	PND01299	866.0125	GF
KAAAWA	HONOLULU, CITY & COUNTY OF	PND01299	866.4875	GF
KAHUKU	HONOLULU, CITY & COUNTY OF	PND01299	866.0125	GF
KAHUKU	HONOLULU, CITY & COUNTY OF	PND01299	866.4875	GF
KAILUA	HONOLULU, CITY & COUNTY OF	PND01299	866.0125	GF
KAILUA	HONOLULU, CITY & COUNTY OF	PND01299	866.4875	GF
KANEOHE	HONOLULU, CITY & COUNTY OF	PND01299	866.0125	GF
KANEOHE	HONOLULU, CITY & COUNTY OF	PND01299	866.4875	GF
KAPOLEI	HONOLULU, CITY & COUNTY OF	PND01299	866.0125	GF
KAPOLEI	HONOLULU, CITY & COUNTY OF	PND01299	866.4875	GF
MAKAKILO	HONOLULU, CITY & COUNTY OF	PND01299	866.0125	GF
MAKAKILO	HONOLULU, CITY & COUNTY OF	PND01299	866.4875	GF
PEARL CITY	HONOLULU, CITY & COUNTY OF	PND01299	866.0125	GF
PEARL CITY	HONOLULU, CITY & COUNTY OF	PND01299	866.4875	GF
WAIALUA	HONOLULU, CITY & COUNTY OF	PND01299	866.0125	GF
WAIALUA	HONOLULU, CITY & COUNTY OF	PND01299	866.4875	GF
WAIANAE	HONOLULU, CITY & COUNTY OF	PND01299	866.0125	GF
WAIANAE	HONOLULU, CITY & COUNTY OF	PND01299	866.4875	GF
WAIMANALO	HONOLULU, CITY & COUNTY OF	PND01299	866.0125	GF
WAIMANALO	HONOLULU, CITY & COUNTY OF	PND01299	866.4875	GF

Iowa

	MARION, COUNTY OF	PNR11474	154.1450	PF
	MARION, COUNTY OF	PNR11474	154.2800	PF
	WORTHINGTON VOL FIRE DEPT	PNR11578	154.1750	PF
	WORTHINGTON VOL FIRE DEPT	PNR11578	154.3550	PF
EAGLE GROV	EMERSON, RON:EMERSON, WAYNE L	PNR11370	47.5800	PS
KNOXVILLE	MARION, COUNTY OF	PNR11474	154.1450	PF
KNOXVILLE	MARION, COUNTY OF	PNR11474	154.2800	PF
MECHANICSV	MECHANICSVILLE, CITY OF	PNR11055	154.4150	PF
MECHANICSV	MECHANICSVILLE, CITY OF	PNR11055	154.4300	PF
PERRY	PERRY, CITY OF	PNR11564	154.7250	PP
PERRY	PERRY, CITY OF	PNR11564	154.7700	PP
SIOUX CENT	SICK, FRED	PND01362	47.6600	PS
WATERLOO	WATERLOO, CITY OF	PNR11607	154.8000	PP
WATERLOO	WATERLOO, CITY OF	PNR11607	465.0250	PP
WATERLOO	WATERLOO, CITY OF	PNR11607	465.0500	PP
WATERLOO	WATERLOO, CITY OF	PNR11607	465.1000	PP
WORTHINGTO	WORTHINGTON VOL FIRE DEPT	PNR11578	154.1750	PF
WORTHINGTO	WORTHINGTON VOL FIRE DEPT	PNR11578	154.3550	PF

Idaho

	NAMPA, CITY OF	PNR11304	154.1900	PF
	NAMPA, CITY OF	PNR11304	154.2800	PF
BELLEVUE	CAREY FIRE PROTECTION DISTRICT	PND01272	154.0850	PL
COEUR D AL	IDAHO, STATE OF	PND01596	153.7400	PL
COEUR D AL	IDAHO, STATE OF	PND01596	153.9350	PL
KETCHUM	CAREY FIRE PROTECTION DISTRICT	PND01272	154.0850	PL
NAMPA	NAMPA, CITY OF	PNR11304	154.1900	PF
NAMPA	NAMPA, CITY OF	PNR11304	154.2800	PF

Illinois

	A TEC AMBULANCE SERVICE	PNR11553	154.8900	PP
	BUSH, VILLAGE OF	PND01248	154.1900	PF
	COLES, COUNTY OF	PNR11414	39.5000	PP
	COLES, COUNTY OF	PNR11414	154.6500	PP
	COLES, COUNTY OF	PNR11414	154.7700	PP
	DUNLAP FIRE PROTECTION DISTRICT	PND01517	462.9500	PM
	DUNLAP FIRE PROTECTION DISTRICT	PND01517	463.0000	PM
	DUNLAP FIRE PROTECTION DISTRICT	PND01517	463.0250	PM
	DUNLAP FIRE PROTECTION DISTRICT	PND01517	463.0500	PM
	DUNLAP FIRE PROTECTION DISTRICT	PND01517	463.0750	PM
	DUNLAP FIRE PROTECTION DISTRICT	PND01517	463.1000	PM
	DUNLAP FIRE PROTECTION DISTRICT	PND01517	463.1250	PM
	DUNLAP FIRE PROTECTION DISTRICT	PND01517	463.1500	PM
	DUNLAP FIRE PROTECTION DISTRICT	PND01517	463.1750	PM
	DUNLAP FIRE PROTECTION DISTRICT	PND01517	465.5750	PF
	DUNLAP FIRE PROTECTION DISTRICT	PND01517	465.6000	PF
	DUNLAP FIRE PROTECTION DISTRICT	PND01517	465.6125	PF
	DUNLAP FIRE PROTECTION DISTRICT	PND01517	465.6250	PF
	MC LEAN, COUNTY OF	PND01607	856.7625	YP
	MC LEAN, COUNTY OF	PND01607	857.7625	YP
	MC LEAN, COUNTY OF	PND01607	858.2375	YP
	MC LEAN, COUNTY OF	PND01607	858.7625	YP
	MC LEAN, COUNTY OF	PND01607	858.9375	YP
	MC LEAN, COUNTY OF	PND01607	859.2375	YP
	MC LEAN, COUNTY OF	PND01607	859.7625	YP
	MC LEAN, COUNTY OF	PND01607	859.9375	YP
	MC LEAN, COUNTY OF	PND01607	860.2375	YP
	MC LEAN, COUNTY OF	PND01607	860.7625	YP
	MC LEAN, COUNTY OF	PND01607	860.9375	YP
	ROANOKE, VILLAGE OF	PND01516	154.0700	PF
	ROANOKE, VILLAGE OF	PND01516	154.1900	PF
	ROANOKE, VILLAGE OF	PND01516	154.2500	PF
	ROANOKE, VILLAGE OF	PND01516	154.2650	PF
	SCOT VANDENBERG AMBULANCE INC	PND01966	462.9500	PM
	SCOT VANDENBERG AMBULANCE INC	PND01966	462.9750	PM
	SCOT VANDENBERG AMBULANCE INC	PND01966	463.0000	PM
	SCOT VANDENBERG AMBULANCE INC	PND01966	463.0250	PM
	SCOT VANDENBERG AMBULANCE INC	PND01966	463.0500	PM
	SCOT VANDENBERG AMBULANCE INC	PND01966	463.0750	PM
	SCOT VANDENBERG AMBULANCE INC	PND01966	463.1000	PM
	SCOT VANDENBERG AMBULANCE INC	PND01966	463.1250	PM
	SCOT VANDENBERG AMBULANCE INC	PND01966	463.1500	PM
	SCOT VANDENBERG AMBULANCE INC	PND01966	463.1750	PM
	TRI COUNTY AMBULANCE SERVICE	PNR11601	155.1150	PL
	UNION, COUNTY OF	PND01178	153.8600	PL
ALBERS	A TEC AMBULANCE SERVICE	PNR11553	154.8750	PP
ALPHA	TRI COUNTY AMBULANCE SERVICE	PNR11601	155.1150	PL
ALSIP	ILLINOIS STATE TOLL HIGHWAY AUTH	PNR11477	856.4875	GP
ALSIP	ILLINOIS STATE TOLL HIGHWAY AUTH	PNR11477	856.9875	GP
ALSIP	ILLINOIS STATE TOLL HIGHWAY AUTH	PNR11649	855.4875	GP
ALSIP	ILLINOIS STATE TOLL HIGHWAY AUTH	PNR11649	855.9625	GP
ARROWSMITH	MC LEAN, COUNTY OF	PND01607	856.7625	YP
ARROWSMITH	MC LEAN, COUNTY OF	PND01607	857.7625	YP
ARROWSMITH	MC LEAN, COUNTY OF	PND01607	858.2375	YP
ARROWSMITH	MC LEAN, COUNTY OF	PND01607	858.7625	YP
ARROWSMITH	MC LEAN, COUNTY OF	PND01607	859.2375	YP
ARROWSMITH	MC LEAN, COUNTY OF	PND01607	859.7625	YP
ARROWSMITH	MC LEAN, COUNTY OF	PND01607	860.2375	YP
ARROWSMITH	MC LEAN, COUNTY OF	PND01607	860.7625	YP
BELVIDERE	ILLINOIS STATE TOLL HIGHWAY AUTH	PNR11477	855.9875	GP
BELVIDERE	ILLINOIS STATE TOLL HIGHWAY AUTH	PNR11477	856.4875	GP
BELVIDERE	ILLINOIS STATE TOLL HIGHWAY AUTH	PNR11477	856.9875	GP
BELVIDERE	ILLINOIS STATE TOLL HIGHWAY AUTH	PNR11649	854.9875	GP
BELVIDERE	ILLINOIS STATE TOLL HIGHWAY AUTH	PNR11649	855.9625	GP
BLOOMINGTO	MC LEAN, COUNTY OF	PND01607	856.7625	YP
BLOOMINGTO	MC LEAN, COUNTY OF	PND01607	857.7625	YP
BLOOMINGTO	MC LEAN, COUNTY OF	PND01607	858.7625	YP
BLOOMINGTO	MC LEAN, COUNTY OF	PND01607	859.7625	YP
BLOOMINGTO	MC LEAN, COUNTY OF	PND01607	860.7625	YP
BUFFALO GR	BUFFALO GROVE, VILLAGE OF	PNR11704	470.3625	PP
BUFFALO GR	BUFFALO GROVE, VILLAGE OF	PNR11704	470.4375	PP
BUFFALO GR	BUFFALO GROVE, VILLAGE OF	PNR11704	473.3625	PP
BUFFALO GR	BUFFALO GROVE, VILLAGE OF	PNR11704	473.4375	PP
BUSH	BUSH, VILLAGE OF	PND01248	154.0700	PF
CARLYLE	A TEC AMBULANCE SERVICE	PNR11553	154.8750	PP
CARLYLE	A TEC AMBULANCE SERVICE	PNR11553	155.1300	PP
CHAMPAIGN	ROANOKE, VILLAGE OF	PND01516	154.0700	PF
CHAMPAIGN	ROANOKE, VILLAGE OF	PND01516	154.1900	PF
CHAMPAIGN	ROANOKE, VILLAGE OF	PND01516	154.2500	PF
CHAMPAIGN	ROANOKE, VILLAGE OF	PND01516	154.2650	PF
CHARLESTON	COLES, COUNTY OF	PNR11414	39.4600	PP
CHARLESTON	COLES, COUNTY OF	PNR11414	39.5000	PP
DE KALB	ILLINOIS STATE TOLL HIGHWAY AUTH	PNR11650	855.7375	GP
DE KALB	ILLINOIS STATE TOLL HIGHWAY AUTH	PNR11650	855.9625	GP
DE KALB	ILLINOIS STATE TOLL HIGHWAY AUTH	PNR11650	856.7375	GP
DE KALB	ILLINOIS STATE TOLL HIGHWAY AUTH	PNR11650	856.9875	GP
DEKALB	ILLINOIS STATE TOLL HIGHWAY AUTH	PNR11650	856.2375	GP
DEKALB	ILLINOIS STATE TOLL HIGHWAY AUTH	PNR11650	856.4875	GP
DES PLAINE	ILLINOIS STATE TOLL HIGHWAY AUTH	PNR11650	855.9875	GP
DES PLAINE	ILLINOIS STATE TOLL HIGHWAY AUTH	PNR11650	856.4875	GP
DIXON	ILLINOIS STATE TOLL HIGHWAY AUTH	PNR11650	855.7375	GP
DIXON	ILLINOIS STATE TOLL HIGHWAY AUTH	PNR11650	855.9625	GP
DIXON	ILLINOIS STATE TOLL HIGHWAY AUTH	PNR11650	856.7375	GP
DIXON	ILLINOIS STATE TOLL HIGHWAY AUTH	PNR11650	856.9875	GP
DOLTON	D G A INC	PND01330	46.0400	PM
DOLTON	D G A INC	PND01330	47.6600	PM
DOLTON	D G A INC	PND01330	150.7900	PM
DOLTON	D G A INC	PND01330	462.9500	PM
DOLTON	D G A INC	PND01330	463.0000	PM
DOLTON	D G A INC	PND01330	463.0250	PM
DOLTON	D G A INC	PND01330	463.0500	PM
DOLTON	D G A INC	PND01330	463.0750	PM
DOLTON	D G A INC	PND01330	463.1000	PM
DOLTON	D G A INC	PND01330	463.1250	PM
DOLTON	D G A INC	PND01330	463.1500	PM
DOLTON	D G A INC	PND01330	463.1750	PM
DOWNERS GR	DOWNERS GROVE, VILLAGE OF	PND01250	470.6625	PP
DOWNERS GR	DOWNERS GROVE, VILLAGE OF	PND01250	473.6625	PP
DUNLAP	DUNLAP FIRE PROTECTION DISTRICT	PND01517	153.8300	PF
DUNLAP	DUNLAP FIRE PROTECTION DISTRICT	PND01517	153.8900	PF
DUNLAP	DUNLAP FIRE PROTECTION DISTRICT	PND01517	153.9500	PF
DUNLAP	DUNLAP FIRE PROTECTION DISTRICT	PND01517	154.0700	PF
DUNLAP	DUNLAP FIRE PROTECTION DISTRICT	PND01517	154.1300	PF
DUNLAP	DUNLAP FIRE PROTECTION DISTRICT	PND01517	154.1450	PF
DUNLAP	DUNLAP FIRE PROTECTION DISTRICT	PND01517	154.1750	PF
DUNLAP	DUNLAP FIRE PROTECTION DISTRICT	PND01517	154.2050	PF
DUNLAP	DUNLAP FIRE PROTECTION DISTRICT	PND01517	154.2500	PF
DUNLAP	DUNLAP FIRE PROTECTION DISTRICT	PND01517	154.2650	PF
DUNLAP	DUNLAP FIRE PROTECTION DISTRICT	PND01517	154.2800	PF
DUNLAP	DUNLAP FIRE PROTECTION DISTRICT	PND01517	154.3250	PF
DUNLAP	DUNLAP FIRE PROTECTION DISTRICT	PND01517	154.3700	PF
DUNLAP	DUNLAP FIRE PROTECTION DISTRICT	PND01517	154.4150	PF
EAST HAZEL	ILLINOIS STATE TOLL HIGHWAY AUTH	PNR11477	855.7375	GP
EAST HAZEL	ILLINOIS STATE TOLL HIGHWAY AUTH	PNR11477	855.9625	GP
EAST HAZEL	ILLINOIS STATE TOLL HIGHWAY AUTH	PNR11478	856.7375	GP
EAST HAZEL	ILLINOIS STATE TOLL HIGHWAY AUTH	PNR11478	856.9875	GP
ELGIN	ILLINOIS STATE TOLL HIGHWAY AUTH	PNR11650	855.2375	GP
ELGIN	ILLINOIS STATE TOLL HIGHWAY AUTH	PNR11650	855.9625	GP
ELIZABETH	JO DAVIESS, COUNTY OF	PNR11600	72.2200	PL
FRANKLIN P	ILLINOIS STATE TOLL HIGHWAY AUTH	PNR11649	855.9875	GP
FRANKLIN P	ILLINOIS STATE TOLL HIGHWAY AUTH	PNR11649	856.4875	GP
FULTON	SAINT JOSEPH HOSPITAL	PND01679	154.1900	PF
FULTON	SAINT JOSEPH HOSPITAL	PND01679	154.3550	PF
GERMAN VAL	NEW HOPE VETERINARY CLINIC	PNR11301	47.5800	PS
GIBSON CIT	FORD, COUNTY OF	PND01524	154.1900	PF
GIBSON CIT	FORD, COUNTY OF	PND01524	154.4000	PF
GIBSON CIT	FORD, COUNTY OF	PND01524	154.4150	PF
HILLSBORO	HILLSBORO HOSPITAL	PNR11155	152.0075	PS
HINSDALE	ILLINOIS STATE TOLL HIGHWAY AUTH	PNR11649	856.2375	GP
HINSDALE	ILLINOIS STATE TOLL HIGHWAY AUTH	PNR11649	856.4875	GP
KICKAPOO	DUNLAP FIRE PROTECTION DISTRICT	PND01517	154.1750	PF
LAKE FORES	ILLINOIS STATE TOLL HIGHWAY AUTH	PNR11477	855.9875	GP
LAKE FORES	ILLINOIS STATE TOLL HIGHWAY AUTH	PNR11477	856.4875	GP
LEMONT	SOUTHWEST CENTRAL DISPATCH	PND01194	860.4375	GP
LEXINGTON	MC LEAN, COUNTY OF	PND01607	856.7625	YP
LEXINGTON	MC LEAN, COUNTY OF	PND01607	857.7625	YP
LEXINGTON	MC LEAN, COUNTY OF	PND01607	858.7625	YP
LEXINGTON	MC LEAN, COUNTY OF	PND01607	858.9375	YP
LEXINGTON	MC LEAN, COUNTY OF	PND01607	859.7625	YP
LEXINGTON	MC LEAN, COUNTY OF	PND01607	859.9375	YP
LEXINGTON	MC LEAN, COUNTY OF	PND01607	860.7625	YP
LEXINGTON	MC LEAN, COUNTY OF	PND01607	860.9375	YP
LINCOLN	LINCOLN, CITY OF	PNR11308	154.4450	PF
MATTOON	COLES, COUNTY OF	PNR11414	39.4600	PP
MATTOON	COLES, COUNTY OF	PNR11414	39.5000	PP
MOKENA	SOUTHWEST CENTRAL DISPATCH	PND01194	860.4375	GP
MOLINE	BLACK HAWK COMMUNITY COLLEGE	PNA00004	153.9050	PP
NAPERVILLE	ILLINOIS STATE TOLL HIGHWAY AUTH	PNR11649	856.4875	GP
NAPERVILLE	ILLINOIS STATE TOLL HIGHWAY AUTH	PNR11649	856.9875	GP
NAPERVILLE	ILLINOIS STATE TOLL HIGHWAY AUTH	PNR11651	855.4875	GP
NAPERVILLE	ILLINOIS STATE TOLL HIGHWAY AUTH	PNR11651	855.9625	GP
NASHVILLE	NASHVILLE, CITY OF	PNR11482	154.0400	PL
NEWMAN	NEWMAN, CITY OF	PNR11480	155.1000	PL
OAK PARK	PARK DISTRICT OF OAK PARK	PND01598	151.2200	PO
ORLAND PAR	ORLAND PARK, VILLAGE OF	PND01193	868.5500	GF
PALOS HEIG	SOUTHWEST CENTRAL DISPATCH	PND01194	860.4375	GP
PAPINEAU	PAPINEAU FIRE PROTECTION DISTRIC	PNR11115	154.4000	PF
PAXTON	FORD, COUNTY OF	PND01524	154.1900	PF
PAXTON	FORD, COUNTY OF	PND01524	154.4000	PF
PAXTON	FORD, COUNTY OF	PND01524	154.4150	PF
PEORIA	DUNLAP FIRE PROTECTION DISTRICT	PND01517	154.2650	PF
ROCHELLE	ILLINOIS STATE TOLL HIGHWAY AUTH	PNR11649	856.4875	GP
ROCHELLE	ILLINOIS STATE TOLL HIGHWAY AUTH	PNR11649	856.9875	GP
ROCHELLE	ILLINOIS STATE TOLL HIGHWAY AUTH	PNR11651	855.4875	GP
ROCHELLE	ILLINOIS STATE TOLL HIGHWAY AUTH	PNR11651	855.9625	GP
SAUK VILLA	SAUK VILLAGE, VILLAGE OF	PNR10756	470.4375	PP
SAUK VILLA	SAUK VILLAGE, VILLAGE OF	PNR10756	473.4375	PP
SOUTH BELO	ILLINOIS STATE TOLL HIGHWAY AUTH	PNR11650	856.2375	GP
SOUTH BELO	ILLINOIS STATE TOLL HIGHWAY AUTH	PNR11650	856.9875	GP
SPRINGFIEL	MEMORIAL MEDICAL CENTER	PND01698	152.0075	PS
STOCKLAND	STOCKLAND, TOWNSHIP OF	PND02006	150.9950	PH
STOCKTON	JO DAVIESS, COUNTY OF	PNR11600	75.5400	PL
THORNTON	ILLINOIS STATE TOLL HIGHWAY AUTH	PNR11649	856.2375	GP
THORNTON	ILLINOIS STATE TOLL HIGHWAY AUTH	PNR11649	856.4875	GP
URBANA	ROANOKE, VILLAGE OF	PND01516	154.0700	PF
URBANA	ROANOKE, VILLAGE OF	PND01516	154.2500	PF
URBANA	ROANOKE, VILLAGE OF	PND01516	154.2650	PF
WILLOWBROO	SOUTHWEST CENTRAL DISPATCH	PND01194	860.4375	GP
WINTHROP H	WINTHROP HARBOR CITY OF	PND02043	155.0550	PL

Indiana

	CLAYPOOL FIRE DEPARTMENT	PNR11345	153.8900	PF
	CLAYPOOL FIRE DEPARTMENT	PNR11345	154.3400	PF
	RED CORNER PIPE CRK TWP VOL FD	PNR11640	154.3100	PF
	WORTHINGTON, TOWN OF	PND01602	153.9350	PL
ANGOLA	FORT WAYNE MEDICAL SOCIETY	PN216018	152.0075	PS
CANNELBURG	CANNELBURG VOL FIRE DEPT	PND01966	154.1450	PF
CANNELBURG	CANNELBURG VOLEER FIRE DEPT	PND01966	154.4000	PF
CARMEL	SOUTH BEND, CITY OF	PND01601	465.3750	PL
COLUMBIA C	COLUMBIA CITY, CITY OF	PND01524	154.1450	PF
COLUMBIA C	COLUMBIA CITY, CITY OF	PND01524	154.2800	PF
COLUMBIA C	COLUMBIA CITY, CITY OF	PND01524	154.3850	PF
ELKHART	ELKHART, CITY OF	PND01294	155.0250	PL
ELWOOD	RED CORNER PIPE CRK TWP VOL FD	PNR11640	154.3100	PF
FORT WAYNE	FORT WAYNE MEDICAL SOCIETY	PN216018	152.0075	PS
HAGERSTOWN	HAGERSTOWN JEFFERSON TNSHIP FI	PNR10888	154.0100	PF
HAGERSTOWN	HAGERSTOWN, TOWN OF	PND01264	154.4712	PL
HUNTINGTON	HUNTINGTON, COUNTY OF	PND01297	856.7375	YP
HUNTINGTON	HUNTINGTON, COUNTY OF	PND01297	857.7375	YP
HUNTINGTON	HUNTINGTON, COUNTY OF	PND01297	858.7375	YP
HUNTINGTON	HUNTINGTON, COUNTY OF	PND01297	859.7375	YP
HUNTINGTON	HUNTINGTON, COUNTY OF	PND01297	860.7375	YP
INDIANAPOL	AMERICAN NATIONAL RED CROSS	PN009157	47.4200	PS
INDIANAPOL	AMERICAN NATIONAL RED CROSS	PN009159	47.4200	PS
INDIANAPOL	AMERICAN NATIONAL RED CROSS	PNR11751	47.4200	PS
MISHAWAKA	MISHAWAKA, CITY OF	PND01692	856.4375	GP
MISHAWAKA	MISHAWAKA, CITY OF	PND01692	857.4375	GP
MISHAWAKA	MISHAWAKA, CITY OF	PND01692	858.4375	GP
MOUNT PLEA	CENTRAL PERRY VOL FIRE DEP	PND01330	154.3850	PF
MOUNT VERN	POSEY, COUNTY OF	PND02039	155.0850	PP
NEW HARMON	POSEY, COUNTY OF	PND02039	155.0850	PP
NOBLESVILL	HAMILTON, COUNTY OF	PND02071	856.8125	YF
NOBLESVILL	HAMILTON, COUNTY OF	PND02071	857.8125	YF
NOBLESVILL	HAMILTON, COUNTY OF	PND02071	858.8125	YF
NOBLESVILL	HAMILTON, COUNTY OF	PND02071	859.8125	YF
NOBLESVILL	HAMILTON, COUNTY OF	PND02071	860.8125	YF
NOBLESVILL	HAMILTON, COUNTY OF	PND02071	867.1875	YF
NOBLESVILL	HAMILTON, COUNTY OF	PND02071	868.0750	YF
NOBLESVILL	HAMILTON, COUNTY OF	PND02071	868.6625	YF
PENDLETON	MISHAWAKA, CITY OF	PND01692	860.7375	GP
WANATAH	CASS CLINTON, TOWNSHIP OF	PNR11655	154.1600	PF
WANATAH	CASS CLINTON, TOWNSHIP OF	PNR11655	154.2800	PF
WANATAH	CASS CLINTON, TOWNSHIP OF	PNR11655	154.3550	PF

Kansas

	OBERLIN, CITY OF	PND01264	153.7850	PL
ALTOONA	KANSAS, STATE OF	PNA00000	866.9625	GF
ALTOONA	KANSAS, STATE OF	PNA00000	867.2000	GF
BALDWIN CI	DOUGLAS, COUNTY OF	PND01295	868.0500	GF
CHANUTE	KANSAS, STATE OF	PNA00000	866.1000	GF
CHANUTE	KANSAS, STATE OF	PNA00000	866.1750	GF
CHANUTE	KANSAS, STATE OF	PNA00000	866.9625	GF
CHANUTE	KANSAS, STATE OF	PNA00000	867.2000	GF
CHANUTE	KANSAS, STATE OF	PNA00000	868.1750	GF
CHANUTE	KANSAS, STATE OF	PNA00000	868.5875	GF
FORT SCOTT	KANSAS, STATE OF	PNA00000	866.9625	GF
FORT SCOTT	KANSAS, STATE OF	PNA00000	868.1750	GF
GARNETT	KANSAS, STATE OF	PNA00000	866.9625	GF
GARNETT	KANSAS, STATE OF	PNA00000	868.1750	GF
HEALY	LANE, COUNTY OF	PND01595	154.0400	PL
HOLTON	JACKSON, COUNTY OF	PND01601	153.8450	PL
HOLTON	JACKSON, COUNTY OF	PND01601	155.0850	PL
INDEPENDEN	KANSAS, STATE OF	PNA00000	866.1750	GF
INDEPENDEN	KANSAS, STATE OF	PNA00000	867.2000	GF
INDEPENDEN	KANSAS, STATE OF	PNA00000	868.5875	GF
IOLA	KANSAS, STATE OF	PNA00000	866.1000	GF
IOLA	KANSAS, STATE OF	PNA00000	866.9625	GF
IOLA	KANSAS, STATE OF	PNA00000	868.1750	GF
LAWRENCE	DOUGLAS, COUNTY OF	PND01295	866.7625	GF
LAWRENCE	DOUGLAS, COUNTY OF	PND01295	867.3375	GF
LAWRENCE	DOUGLAS, COUNTY OF	PND01295	868.0500	GF
LEAVENWORT	LEAVENWORTH, COUNTY OF	PND01297	851.5625	GP
LEAVENWORT	LEAVENWORTH, COUNTY OF	PND01297	852.5625	GP
LEAVENWORT	LEAVENWORTH, COUNTY OF	PND01297	853.5625	GP
LEOTI	WICHITA, COUNTY OF	PND01258	39.4600	PP
LEOTI	WICHITA, COUNTY OF	PND01258	39.5200	PP
LEOTI	WICHITA, COUNTY OF	PND01258	39.5800	PP
LEOTI	WICHITA, COUNTY OF	PND01258	39.7000	PP
LEOTI	WICHITA, COUNTY OF	PND01258	154.7100	PP
MISSION	JOHNSON, COUNTY OF	PND01690	867.1375	GF
MISSION	JOHNSON, COUNTY OF	PND01690	867.3875	GF
MISSION	JOHNSON, COUNTY OF	PND01690	867.6375	GF
OBERLIN	OBERLIN, CITY OF	PND01264	155.0250	PL
OLATHE	JOHNSON, COUNTY OF	PND01690	867.1375	GF
OLATHE	JOHNSON, COUNTY OF	PND01690	867.3875	GF
OLATHE	JOHNSON, COUNTY OF	PND01690	867.6375	GF
OVERLAND P	JOHNSON, COUNTY OF	PND01690	867.1375	GF
OVERLAND P	JOHNSON, COUNTY OF	PND01690	867.3875	GF
OVERLAND P	JOHNSON, COUNTY OF	PND01690	867.6375	GF
PAOLA	KANSAS, STATE OF	PNA00000	866.9625	GF
PHILLIPSBU	JOHNSON, COUNTY OF	PND01276	155.1000	PL
PITTSBURG	KANSAS, STATE OF	PNA00000	868.1750	GF
PITTSBURG	KANSAS, STATE OF	PNA00000	868.5875	GF
SEDAN	KANSAS, STATE OF	PNA00000	866.1750	GF
SEVERY	KANSAS, STATE OF	PNA00000	866.9625	GF
VIRGIL	KANSAS, STATE OF	PNA00000	866.1000	GF
WEST MINER	KANSAS, STATE OF	PNA00000	868.5875	GF
WICHITA	SEDGWICK, COUNTY OF	PND01602	153.9950	PL
WICHITA	SEDGWICK, COUNTY OF	PND01602	155.0550	PL
WICHITA	SEDGWICK, COUNTY OF	PND01929	855.2125	GP
WICHITA	SEDGWICK, COUNTY OF	PND01929	855.7125	GP
XENIA	KANSAS, STATE OF	PNA00000	868.1750	GF

Kentucky

	RAYWICK FIRE DEPARTMENT	PND01678	154.2350	PF
	VERSAILLES, CITY OF	PNR11958	153.8300	PF
	VERSAILLES, CITY OF	PNR11958	154.4450	PF
ANCHORAGE	ANCHORAGE, CITY OF	PNR11908	155.1000	PL
CAMPBELLSV	CAMPBELLSVILLE, CITY OF	PNR11767	155.0850	PL
LOUISVILLE	LOUISVILLE, CITY OF	PND01691	856.2125	YP
LOUISVILLE	LOUISVILLE, CITY OF	PND01691	856.4625	YP
LOUISVILLE	LOUISVILLE, CITY OF	PND01691	856.9375	YP
LOUISVILLE	LOUISVILLE, CITY OF	PND01691	857.2125	YP
LOUISVILLE	LOUISVILLE, CITY OF	PND01691	857.4625	YP
LOUISVILLE	LOUISVILLE, CITY OF	PND01691	857.9375	YP
LOUISVILLE	LOUISVILLE, CITY OF	PND01691	858.2125	YP
LOUISVILLE	LOUISVILLE, CITY OF	PND01691	858.4625	YP
LOUISVILLE	LOUISVILLE, CITY OF	PND01691	858.9375	YP
LOUISVILLE	LOUISVILLE, CITY OF	PND01691	859.2125	YP
LOUISVILLE	LOUISVILLE, CITY OF	PND01691	859.4625	YP
LOUISVILLE	LOUISVILLE, CITY OF	PND01691	859.9375	YP
LOUISVILLE	LOUISVILLE, CITY OF	PND01691	860.2125	YP
LOUISVILLE	LOUISVILLE, CITY OF	PND01691	860.4625	YP
LOUISVILLE	LOUISVILLE, CITY OF	PND01691	860.9375	YP
LOUISVILLE	LOUISVILLE, CITY OF	PND01691	861.9875	YP
LOUISVILLE	LOUISVILLE, CITY OF	PND01691	862.9875	YP
LOUISVILLE	LOUISVILLE, CITY OF	PND01691	863.9875	YP
LOUISVILLE	LOUISVILLE, CITY OF	PND01691	864.9875	YP
LOUISVILLE	LOUISVILLE, CITY OF	PND01691	865.9875	YP
MURRAY	MURRAY, CITY OF	PND01265	154.8600	PP
SEBREE	SEBREE, CITY OF	PNR11451	154.1750	PF
STEARNS	WEST MC CREARY FIRE PROTECTION	PND02005	154.2800	PF
TOMPKINSVI	MONROE, COUNTY OF	PND02039	39.5800	PL
VERSAILLES	VERSAILLES, CITY OF	PNR11958	154.4450	PF

Louisiana

	WEST BATON ROUGE, PARISH OF	PND01270	153.7550	PL
BATON ROUG	LOUISIANA, STATE OF	PND02316	856.2375	YP
BATON ROUG	LOUISIANA, STATE OF	PND02316	856.4625	YP
BATON ROUG	LOUISIANA, STATE OF	PND02316	857.2375	YP
BATON ROUG	LOUISIANA, STATE OF	PND02316	858.2375	YP
BATON ROUG	LOUISIANA, STATE OF	PND02316	859.2375	YP
BEL	LOUISIANA, STATE OF	PND01267	151.1750	PO
BEL	LOUISIANA, STATE OF	PND01267	151.2350	PO
BEL	LOUISIANA, STATE OF	PND01267	151.2500	PO
BEL	LOUISIANA, STATE OF	PND01267	151.2950	PO
BEL	LOUISIANA, STATE OF	PND01267	151.3700	PO
BEL	LOUISIANA, STATE OF	PND01267	151.4000	PO
DEQUINCY	LOUISIANA, STATE OF	PND02316	856.4625	YP
DEQUINCY	LOUISIANA, STATE OF	PND02316	856.7625	YP
DEQUINCY	LOUISIANA, STATE OF	PND02316	857.4625	YP
DEQUINCY	LOUISIANA, STATE OF	PND02316	858.4625	YP
ELIZABETH	LOUISIANA, STATE OF	PND01267	151.1750	PO
ELIZABETH	LOUISIANA, STATE OF	PND01267	151.2350	PO
ELIZABETH	LOUISIANA, STATE OF	PND01267	151.2500	PO
ELIZABETH	LOUISIANA, STATE OF	PND01267	151.2950	PO
ELIZABETH	LOUISIANA, STATE OF	PND01267	151.3700	PO
ELIZABETH	LOUISIANA, STATE OF	PND01267	151.4000	PO
GLENMORA	LOUISIANA, STATE OF	PND01267	151.1750	PO
GLENMORA	LOUISIANA, STATE OF	PND01267	151.2350	PO
GLENMORA	LOUISIANA, STATE OF	PND01267	151.2500	PO
GLENMORA	LOUISIANA, STATE OF	PND01267	151.2950	PO
GLENMORA	LOUISIANA, STATE OF	PND01267	151.3700	PO
GLENMORA	LOUISIANA, STATE OF	PND01267	151.4000	PO
GROSSE TET	PLAQUEMINE, CITY OF	PND01525	33.9800	PF
HAUGHTON	EAST CENTRAL BOSSIER PARISH FIRE	PND01174	153.8900	PF
HINESTON	LOUISIANA, STATE OF	PND01267	151.1750	PO
HINESTON	LOUISIANA, STATE OF	PND01267	151.2350	PO
HINESTON	LOUISIANA, STATE OF	PND01267	151.2500	PO
HINESTON	LOUISIANA, STATE OF	PND01267	151.2950	PO
HINESTON	LOUISIANA, STATE OF	PND01267	151.3700	PO
HINESTON	LOUISIANA, STATE OF	PND01267	151.4000	PO
JENA	LOUISIANA, STATE OF	PND02316	856.4625	YP
JENA	LOUISIANA, STATE OF	PND02316	857.4625	YP
JENA	LOUISIANA, STATE OF	PND02316	858.4625	YP
JENA	LOUISIANA, STATE OF	PND02316	860.7625	YP
OAK GROVE	LOUISIANA, STATE OF	PND02316	856.2375	YP
OAK GROVE	LOUISIANA, STATE OF	PND02316	856.4625	YP
OAK GROVE	LOUISIANA, STATE OF	PND02316	857.4625	YP
OAK GROVE	LOUISIANA, STATE OF	PND02316	858.4625	YP
PINE PRAIR	LOUISIANA, STATE OF	PND01267	151.1750	PO
PINE PRAIR	LOUISIANA, STATE OF	PND01267	151.2350	PO
PINE PRAIR	LOUISIANA, STATE OF	PND01267	151.2500	PO
PINE PRAIR	LOUISIANA, STATE OF	PND01267	151.2950	PO
PINE PRAIR	LOUISIANA, STATE OF	PND01267	151.3700	PO
PINE PRAIR	LOUISIANA, STATE OF	PND01267	151.4000	PO
PLAINVIEW	LOUISIANA, STATE OF	PND01267	151.1750	PO
PLAINVIEW	LOUISIANA, STATE OF	PND01267	151.2350	PO
PLAINVIEW	LOUISIANA, STATE OF	PND01267	151.2500	PO
PLAINVIEW	LOUISIANA, STATE OF	PND01267	151.2950	PO

PLAINVIEW	LOUISIANA, STATE OF	PND01267	151.3700	PO
PLAINVIEW	LOUISIANA, STATE OF	PND01267	151.4000	PO
PLAQUEMINE	PLAQUEMINE, CITY OF	PND01525	33.9800	PF
SHREVEPORT	LOUISIANA, STATE OF	PND02316	856.4625	YP
SHREVEPORT	LOUISIANA, STATE OF	PND02316	857.4625	YP
SHREVEPORT	LOUISIANA, STATE OF	PND02316	858.4625	YP
SHREVEPORT	LOUISIANA, STATE OF	PND02316	859.4625	YP
SHREVEPORT	LOUISIANA, STATE OF	PND02316	860.4625	YP
SICILY ISL	SICILY ISLAND V F D	PND01524	154.2950	PF
WHITE CAST	PLAQUEMINE, CITY OF	PND01525	33.9800	PF

Massachusetts

	RAYNHAM, TOWN OF	PNR10395	485.5125	PP
	RAYNHAM, TOWN OF	PNR10395	486.0625	PP
BOSTON	BRIGHAM & WOMENS HOSPITAL	PND01331	45.9200	PS
BOYLSTON	BOYLSTON, TOWN OF	PNR11207	48.3800	IW
HANSON	PLYMOUTH, COUNTY OF	PNR10490	485.8875	PP
HANSON	PLYMOUTH, COUNTY OF	PNR10490	486.0375	PP
HANSON	PLYMOUTH, COUNTY OF	PNR10491	482.8875	PP
HANSON	PLYMOUTH, COUNTY OF	PNR10491	483.0375	PP
HARWICH	HARWICH, TOWN OF	PND01266	33.7000	PF
HARWICH	HARWICH, TOWN OF	PND01266	33.9600	PF
HARWICH	HARWICH, TOWN OF	PND01266	465.5500	PF
LEXINGTON	LEXINGTON, TOWN OF	PNR11777	154.1300	PF
LEXINGTON	LEXINGTON, TOWN OF	PNR11777	154.2200	PF
LEXINGTON	LEXINGTON, TOWN OF	PNR11777	154.2650	PF
LEXINGTON	LEXINGTON, TOWN OF	PNR11777	154.3400	PF
LEXINGTON	LEXINGTON, TOWN OF	PNR11777	465.5875	PF
MARION	MARION, TOWN OF	PND01524	33.5200	PF
MARION	MARION, TOWN OF	PND01524	33.6400	PF
MARION	MARION, TOWN OF	PND01524	33.7000	PF
MARION	MARION, TOWN OF	PND01524	33.9000	PF
MARION	MARION, TOWN OF	PND01524	154.2950	PF
MEDDLEBORO	PLYMOUTH, COUNTY OF	PNR10490	485.8875	PP
MEDDLEBORO	PLYMOUTH, COUNTY OF	PNR10490	486.0375	PP
PITTSFIELD	PITTSFIELD, CITY OF	PNR11481	154.3100	PF
PITTSFIELD	PITTSFIELD, CITY OF	PNR11481	154.3400	PF
PLYMOUTH	PLYMOUTH, COUNTY OF	PNR10490	485.8875	PP
PLYMOUTH	PLYMOUTH, COUNTY OF	PNR10490	486.0375	PP
PLYMOUTH	PLYMOUTH, COUNTY OF	PNR10491	482.8875	PP
PLYMOUTH	PLYMOUTH, COUNTY OF	PNR10491	483.0375	PP
RAYNHAM	RAYNHAM, TOWN OF	PNR10395	483.0625	PP
RAYNHAM	RAYNHAM, TOWN OF	PNR10395	485.5125	PP
RAYNHAM	RAYNHAM, TOWN OF	PNR10395	486.0625	PP

Maryland

EAST NEW M	EAST NEW MARKET VOL FIRE CO INC	PNR11767	46.0600	PF
ELKTON	CECIL, COUNTY OF	PNR11473	46.1800	PF
ELKTON	CECIL, COUNTY OF	PNR11473	46.2600	PF
ELKTON	CECIL, COUNTY OF	PNR11473	46.4000	PF
GLYNDON	BLAKEY, RACHEL	PND02110	33.0400	PS
HAVRE DE G	CECIL, COUNTY OF	PNR11473	46.1800	PF
HAVRE DE G	CECIL, COUNTY OF	PNR11473	46.4000	PF
WALDORF	MARYLAND, STATE OF	PND01251	39.0400	PP
WALDORF	MARYLAND, STATE OF	PND01251	39.0600	PP
WALDORF	MARYLAND, STATE OF	PND01251	39.1000	PP
WALDORF	MARYLAND, STATE OF	PND01251	39.1400	PP
WALDORF	MARYLAND, STATE OF	PND01251	39.2400	PP
WALDORF	MARYLAND, STATE OF	PND01251	39.2600	PP
WALDORF	MARYLAND, STATE OF	PND01251	39.2800	PP
WALDORF	MARYLAND, STATE OF	PND01251	39.3200	PP
WALDORF	MARYLAND, STATE OF	PND01251	39.3400	PP
WALDORF	MARYLAND, STATE OF	PND01251	39.3800	PP
WALDORF	MARYLAND, STATE OF	PND01251	39.4000	PP
WALDORF	MARYLAND, STATE OF	PND01251	39.5200	PP
WALDORF	MARYLAND, STATE OF	PND01251	39.6200	PP
WALDORF	MARYLAND, STATE OF	PND01251	39.6600	PP
WALDORF	MARYLAND, STATE OF	PND01251	44.7400	PP
WALDORF	MARYLAND, STATE OF	PND01251	44.9000	PP
WELCOME	MARYLAND, STATE OF	PND01251	39.0600	PP
WELCOME	MARYLAND, STATE OF	PND01251	39.1000	PP
WELCOME	MARYLAND, STATE OF	PND01251	39.2400	PP
WELCOME	MARYLAND, STATE OF	PND01251	39.2600	PP
WELCOME	MARYLAND, STATE OF	PND01251	39.6200	PP

Maine

	BATH, CITY OF	PND01069	153.8000	PL
	CAPITAL AMBULANCE SERVICE	PN216014	462.9375	PS
	CAPITAL AMBULANCE SERVICE	PN216014	467.9375	PS
	MADAWASKA, TOWN OF	PNR11232	154.3100	PF
	WASHBURN, TOWN OF	PNR11306	154.0850	PL
AUBURN	MAINE, STATE OF	PND01175	45.5600	PL
AUBURN	MAINE, STATE OF	PND01175	45.6400	PL
FALMOUTH	MAINE TURNPIKE AUTHORITY	PND01965	151.0700	PH
HOULTON	MAINE, STATE OF	PND01183	45.5600	PL
HOULTON	MAINE, STATE OF	PND01183	45.6400	PL
LEWISTON	MAINE, STATE OF	PND01175	45.5600	PL
LEWISTON	MAINE, STATE OF	PND01175	45.6400	PL
LITCHFIELD	MAINE TURNPIKE AUTHORITY	PND01965	151.0550	PH
MADAWASKA	MADAWASKA, TOWN OF	PNR11232	154.3100	PF
SANFORD	SANFORD, TOWN OF	PND02006	465.5250	PF
SOUTH HIRA	HIRAM, TOWN OF	PNR11768	155.0400	PL
SOUTH WIND	MAINE, STATE OF	PND01183	45.5600	PL
SOUTH WIND	MAINE, STATE OF	PND01183	45.6400	PL
STOCKTON	SEARSPORT, CITY OF	PND01598	153.7550	PL
WARREN	WARREN, TOWN OF	PNR11849	33.7000	PF
WARREN	WARREN, TOWN OF	PNR11849	154.3100	PF
WARREN	WARREN, TOWN OF	PNR11849	154.4300	PF
WASHBURN	WASHBURN, TOWN OF	PNR11306	154.0850	PL
WISCASSET	MAINE, STATE OF	PND01182	45.5600	PL
WISCASSET	MAINE, STATE OF	PND01182	45.6400	PL
WISCASSET	MAINE, STATE OF	PND01183	45.5600	PL
WISCASSET	MAINE, STATE OF	PND01183	45.6400	PL

Michigan

	CITY OF FERNDALE SCHOOL DIST	PND01835	464.8750	IB
	LIFECARE AMBULANCE SVICE OF BR	PN215658	462.9625	PM
	LIFECARE AMBULANCE SVICE OF BR	PN215658	465.5125	PM
	LIFECARE AMBULANCE SVICE OF BR	PN215658	467.9625	PM
	SAINT JOSEPH MERCY HOSPITAL	PNR11568	462.9500	PS
	SAINT JOSEPH MERCY HOSPITAL	PNR11568	462.9750	PS
	SAINT JOSEPH MERCY HOSPITAL	PNR11568	463.0000	PS
	SAINT JOSEPH MERCY HOSPITAL	PNR11568	463.0250	PS
	SAINT JOSEPH MERCY HOSPITAL	PNR11568	463.0500	PS
	SAINT JOSEPH MERCY HOSPITAL	PNR11568	463.0750	PS
	SAINT JOSEPH MERCY HOSPITAL	PNR11568	463.1250	PS
	SAINT JOSEPH MERCY HOSPITAL	PNR11568	463.1500	PS
	SAINT JOSEPH MERCY HOSPITAL	PNR11568	463.1750	PS
ANN ARBOR	SAINT JOSEPH MERCY HOSPITAL	PNR11568	462.9500	PS
ANN ARBOR	SAINT JOSEPH MERCY HOSPITAL	PNR11568	462.9750	PS
ANN ARBOR	SAINT JOSEPH MERCY HOSPITAL	PNR11568	463.0000	PS
ANN ARBOR	SAINT JOSEPH MERCY HOSPITAL	PNR11568	463.0250	PS
ANN ARBOR	SAINT JOSEPH MERCY HOSPITAL	PNR11568	463.0500	PS
ANN ARBOR	SAINT JOSEPH MERCY HOSPITAL	PNR11568	463.0750	PS
ANN ARBOR	SAINT JOSEPH MERCY HOSPITAL	PNR11568	463.1250	PS
ANN ARBOR	SAINT JOSEPH MERCY HOSPITAL	PNR11568	463.1500	PS
ANN ARBOR	SAINT JOSEPH MERCY HOSPITAL	PNR11568	463.1750	PS
BAY CITY	PORTSMOUTH, TOWNSHIP OF	PNR11407	153.9950	PL
CHARLOTTE	EATON, COUNTY OF	PND01607	851.4375	GP
CHEBOYGAN	MICHIGAN, STATE OF	PN215681	44.6400	PO
CHEBOYGAN	MICHIGAN, STATE OF	PN215681	44.7200	PO
CHEBOYGAN	MICHIGAN, STATE OF	PN215681	44.8000	PO
CHEBOYGAN	MICHIGAN, STATE OF	PN215681	44.8400	PO
CHEBOYGAN	MICHIGAN, STATE OF	PN215681	151.2350	PO
COEUR D AL	OTTAWA, COUNTY OF	PNR11518	153.7400	BA
ESSEXVILLE	HAMPTON, TOWNSHIP OF	PN215927	154.1600	PF
ESSEXVILLE	HAMPTON, TOWNSHIP OF	PN215927	154.2050	PF
ESSEXVILLE	HAMPTON, TOWNSHIP OF	PN215927	154.3100	PF
GAYLORD	OTSEGO, COUNTY OF	PND01596	45.1200	PL
HAMBURG	HAMBURG FIRE DEPT INC	PND01966	154.0100	PF
HAMBURG	HAMBURG FIRE DEPT INC	PND01966	154.3550	PF
HAMBURG	HAMBURG FIRE DEPT INC	PND01966	154.4000	PF
HAMBURG	HAMBURG FIRE DEPT INC	PND01966	154.4450	PF
HILLSDALE	HILLSDALE, COUNTY OF	PNA00001	154.8300	PP
JACKSON	MICHIGAN, STATE OF	PNR10678	45.4400	PL
OWOSSO	HILLSDALE, COUNTY OF	PNA00001	154.7400	PP
PONTIAC	PONTIAC, CITY OF	PND01296	866.0125	YF
PONTIAC	PONTIAC, CITY OF	PND01296	866.1000	YF
PONTIAC	PONTIAC, CITY OF	PND01296	866.1625	YF
PONTIAC	PONTIAC, CITY OF	PND01296	866.2500	YF
PONTIAC	PONTIAC, CITY OF	PND01296	866.5125	YF
PONTIAC	PONTIAC, CITY OF	PND01296	866.6750	YF
PONTIAC	PONTIAC, CITY OF	PND01296	866.7500	YF
PONTIAC	PONTIAC, CITY OF	PND01296	867.0125	YF
PONTIAC	PONTIAC, CITY OF	PND01296	867.5125	YF
PONTIAC	PONTIAC, CITY OF	PND01296	868.0125	YF
POTTERVILL	EATON, COUNTY OF	PND01607	851.4375	GP
PRESQUE IS	OCQUEOC BEARINGER, TOWNSHIP OF	PN215914	154.1600	PF
PRESQUE IS	OCQUEOC BEARINGER, TOWNSHIP OF	PN215914	154.2950	PF
ROYAL OAK	ALMONT, VILLAGE OF	PNR11566	153.7100	IW
TAYLOR	DOWNRIVER MUTUAL AID	PND01138	866.5750	YF
TAYLOR	DOWNRIVER MUTUAL AID	PND01138	866.6000	YF
TAYLOR	DOWNRIVER MUTUAL AID	PND01138	866.6250	YF
TAYLOR	DOWNRIVER MUTUAL AID	PND01138	866.8250	YF
TAYLOR	DOWNRIVER MUTUAL AID	PND01138	867.0500	YF
TAYLOR	DOWNRIVER MUTUAL AID	PND01138	867.1250	YF
TAYLOR	DOWNRIVER MUTUAL AID	PND01138	867.2000	YF
TAYLOR	DOWNRIVER MUTUAL AID	PND01138	867.2625	YF
TAYLOR	DOWNRIVER MUTUAL AID	PND01138	867.5750	YF
TAYLOR	DOWNRIVER MUTUAL AID	PND01138	867.7750	YF
TAYLOR	DOWNRIVER MUTUAL AID	PND01138	867.8000	YF
TAYLOR	DOWNRIVER MUTUAL AID	PND01138	867.8250	YF
TAYLOR	DOWNRIVER MUTUAL AID	PND01138	868.0750	YF
TAYLOR	DOWNRIVER MUTUAL AID	PND01138	868.1000	YF
TAYLOR	DOWNRIVER MUTUAL AID	PND01138	868.1250	YF
TAYLOR	DOWNRIVER MUTUAL AID	PND01138	868.3375	YF
TAYLOR	DOWNRIVER MUTUAL AID	PND01138	868.5875	YF
TAYLOR	DOWNRIVER MUTUAL AID	PND01138	868.6500	YF
TAYLOR	DOWNRIVER MUTUAL AID	PND01138	868.7500	YF
TAYLOR	DOWNRIVER MUTUAL AID	PND01138	868.8375	YF
TAYLOR	TAYLOR, CITY OF	PND00039	154.0850	PL
WHITE LAKE	WHITE LAKE, TOWNSHIP OF	PNR11107	154.0550	PL

Minnesota

	WENDEL, CITY OF	PNR11960	154.2500	PF
	WENDEL, CITY OF	PNR11960	154.2950	PF
	YELLOW MEDICINE, COUNTY OF	PNR11956	153.7700	PF
	YELLOW MEDICINE, COUNTY OF	PNR11956	154.0100	PF

	YELLOW MEDICINE, COUNTY OF	PNR11956	154.2950	PF
	YELLOW MEDICINE, COUNTY OF	PNR11956	154.3100	PF
AITKIN	AITKIN, COUNTY OF	PND01263	154.8900	PP
AITKIN	AITKIN, COUNTY OF	PND01263	462.3500	PP
ALEXANDRIA	ALEXANDRIA, CITY OF	PNR11907	154.9800	PL
CANBY	YELLOW MEDICINE, COUNTY OF	PNR11956	154.3100	PF
CARVER	CARVER, COUNTY OF	PND01965	150.9950	PH
CHISAGO CI	CHISAGO CITY, CITY OF	PNR11877	154.1150	PL
CLARKFIELD	YELLOW MEDICINE, COUNTY OF	PNR11956	154.3100	PF
DULUTH	SAINT LOUIS, COUNTY OF	PND00039	72.3200	PP
EAGAN	WYOMING, TOWNSHIP OF	PNR11420	855.9625	GP
GLENWOOD	GLACIAL RIDGE HOSPITAL	PN216080	152.0075	PM
GOLDEN VAL	HENNEPIN, COUNTY OF	PND00496	150.7750	PM
GOLDEN VAL	HENNEPIN, COUNTY OF	PND00496	150.7900	PM
GOLDEN VAL	HENNEPIN, COUNTY OF	PND01603	151.2500	PL
GOLDEN VAL	HENNEPIN, COUNTY OF	PND01603	154.1000	PL
GRANITE FA	YELLOW MEDICINE, COUNTY OF	PNR11956	153.7700	PF
GRANITE FA	YELLOW MEDICINE, COUNTY OF	PNR11956	154.2950	PF
GRANITE FA	YELLOW MEDICINE, COUNTY OF	PNR11956	154.3100	PF
HILL CITY	AITKIN, COUNTY OF	PND01263	155.0100	PP
MAPLE GROV	HENNEPIN, COUNTY OF	PND01603	154.1000	PL
MAPLE PLAI	HENNEPIN, COUNTY OF	PND01603	151.2500	PL
MINNEAPOLI	HENNEPIN, COUNTY OF	PND01603	151.2500	PL
MINNEAPOLI	MINNEAPOLIS, CITY OF	PNR10573	153.4100	IW
MINNEAPOLI	MINNESOTA, STATE OF	PND01607	854.3625	GP
MINNEAPOLI	MINNESOTA, STATE OF	PND01607	854.5375	GP
MOOSE LAKE	MINNESOTA, STATE OF	PND01682	151.1900	PO
MOOSE LAKE	MINNESOTA, STATE OF	PND01682	151.3700	PO
MOOSE LAKE	MINNESOTA, STATE OF	PND01682	151.4150	PO
PLYMOUTH	HENNEPIN, COUNTY OF	PND01603	151.2500	PL
PLYMOUTH	HENNEPIN, COUNTY OF	PND01603	153.8450	PL
PLYMOUTH	HENNEPIN, COUNTY OF	PND01603	154.0550	PL
PLYMOUTH	HENNEPIN, COUNTY OF	PND01603	154.1000	PL
PLYMOUTH	HENNEPIN, COUNTY OF	PND01603	154.9950	PL
ROCHESTER	MINNESOTA, STATE OF	PND01266	151.2650	PO
ROCHESTER	MINNESOTA, STATE OF	PND01266	151.4150	PO
SAINT CLOU	MINNESOTA, STATE OF	PND01599	154.0850	PL
SAINT CLOU	MINNESOTA, STATE OF	PND01599	154.1150	PL
SAINT CLOU	MINNESOTA, STATE OF	PND01599	154.9950	PL
SAINT JAME	WATONWAN, COUNTY OF	PNR11326	154.9800	PL
SAINT PAUL	MINNESOTA, STATE OF	PND01602	153.9650	PL
SAINT PAUL	SAINT PAUL, CITY OF	PNR10675	854.7125	GP
SHAW	SAINT LOUIS, COUNTY OF	PND00039	154.8900	PP
SHAW	SAINT LOUIS, COUNTY OF	PND00039	154.9500	PP
SPRING PAR	HENNEPIN, COUNTY OF	PND01603	154.9950	PL
VIRGINIA	SAINT LOUIS, COUNTY OF	PND00039	75.9200	PP
WENDELL	WENDEL, CITY OF	PNR11960	154.2500	PF
WENDELL	WENDEL, CITY OF	PNR11960	154.2950	PF
WOOD LAKE	YELLOW MEDICINE, COUNTY OF	PNR11956	154.3100	PF

Missouri

	CABOOL, CITY OF	PND01679	154.0700	PF
	SHREWSBURY, CITY OF	PND02005	153.8900	PF
	SHREWSBURY, CITY OF	PND02005	154.2800	PF
	SOUTHERN WEBSTER CO. FIRE PRO	PND01526	154.1300	PF
	SOUTHERN WEBSTER CO. FIRE PRO	PND01526	154.1750	PF
	S.HERN WEBSTER COUNTY FIRE PRO	PND01526	154.2800	PF
	ST ANTHONY MEDICAL CENTER	PNR11295	463.0625	PS
	ST ANTHONY MEDICAL CENTER	PNR11295	468.0625	PS
BROOKFIELD	BROOKFIELD, CITY OF	PNR10583	155.0250	PL
DONIPHAN	DONIPHAN, CITY OF	PND01276	154.0550	PL
FORDLAND	S.HERN WEBSTER COUNTY FIRE PRO	PND01526	154.1300	PF
FORDLAND	S.ERN WEBSTER COUNTY FIRE PRO	PND01526	154.1750	PF
FORDLAND	S.HERN WEBSTER COUNTY FIRE PRO	PND01526	154.2800	PF
HERMANN	HERMANN FIRE COMPANY NO 1 INC	PNR11835	154.2050	PF
HERMANN	HERMANN FIRE COMPANY NO 1 INC	PNR11835	154.2800	PF
MOUND CITY	MOUND CITY, CITY OF	PND01248	154.4000	PF
NOEL	NOEL VOLUNTEER FIRE DEPARTMENT	PND01515	153.8900	PF
NOEL	NOEL VOLUNTEER FIRE DEPARTMENT	PND01515	154.2050	PF
NOEL	NOEL VOLUNTEER FIRE DEPARTMENT	PND01515	154.2800	PF
POTOSI	POTOSI HOUSING AUTHORITY	PND01176	154.9650	PL
SAINT CHAR	MISSOURI HOSPITAL ASSOCIATION	PND00931	463.0000	PM
SAINT CHAR	MISSOURI HOSPITAL ASSOCIATION	PND00931	463.0250	PM
SAINT CHAR	MISSOURI HOSPITAL ASSOCIATION	PND00931	463.0500	PM
SAINT CHAR	MISSOURI HOSPITAL ASSOCIATION	PND00931	463.0750	PM
SAINT CHAR	MISSOURI HOSPITAL ASSOCIATION	PND00931	463.1000	PM
SAINT CHAR	MISSOURI HOSPITAL ASSOCIATION	PND00931	463.1250	PM
SAINT CHAR	MISSOURI HOSPITAL ASSOCIATION	PND00931	463.1500	PM
SAINT CHAR	MISSOURI HOSPITAL ASSOCIATION	PND00931	463.1750	PM
SEYMOUR	SOUTHERN WEBSTER CNTY FIRE PRO	PND01526	154.1300	PF
SEYMOUR	SOUTHERN WEBSTER CNTY FIRE PRO	PND01526	154.1750	PF
SEYMOUR	SOUTHERN WEBSTER CNTY FIRE PRO	PND01526	154.2800	PF
TROY	LINCOLN, COUNTY OF	PND01253	154.7100	PP
TROY	LINCOLN, COUNTY OF	PND01253	465.1500	PP
WINFIELD	LINCOLN, COUNTY OF	PND01253	153.2900	PP

Mississippi

	GEORGE COUNTY HOSPITAL	PND02005	150.7750	PM
BRANDON	BRANDON, CITY OF	PNR11916	46.5200	PL
BRANDON	BRANDON, CITY OF	PNR11916	155.0250	PL
FAYETTE	MISSISSIPPI FORESTRY COMMISSION	PND01518	151.4150	PO
GAUTIER	GAUTIER, CITY OF	PND01296	855.9875	GP
INDIANOLA	INDIANOLA, CITY OF	PND01599	154.6500	PP
LAUREL	SOUTH CENTRAL REGIONAL MED C	PNR11617	462.9375	PS
LAUREL	SOUTH CENTRAL REGIONAL MED C	PNR11617	463.0875	PS
MABEN	MATHISTON, TOWN OF	PNR11567	153.9500	PF
MATHISTON	MATHISTON, TOWN OF	PNR11567	153.9500	PF
MATHISTON	MATHISTON, TOWN OF	PNR11567	154.1600	PF
MATHISTON	MATHISTON, TOWN OF	PNR11567	154.4450	PF
SANDERSVIL	SOUTH CENTRAL REG. MEDICAL C	PNR11617	462.9500	PS
SENATOBIA	MS FORESTRY COMMISSION	PND01598	44.9200	PO
SENATOBIA	MS FORESTRY COMMISSION	PND01598	45.0000	PO
SENATOBIA	MS FORESTRY COMMISSION	PND01598	45.0400	PO
STARKVILLE	MATHISTON, TOWN OF	PNR11567	153.9500	PF

Montana

DILLON	DILLON, CITY OF	PND01267	154.4637	PL

North Carolina

	HENDERSON, COUNTY OF	PNA00001	151.0700	PL
	HOPKINS RURAL FIRE DEPARTMENT	PND01517	154.1450	PF
	HOPKINS RURAL FIRE DEPARTMENT	PND01517	154.1900	PF
	HOPKINS RURAL FIRE DEPARTMENT	PND01517	154.2950	PF
	MANTEO, TOWN OF	PNR11635	465.0250	PP
	MANTEO, TOWN OF	PNR11635	465.2500	PP
	MANTEO, TOWN OF	PNR11635	465.3750	PP
	NASH, COUNTY OF	PNR11483	463.0000	PS
	NASH, COUNTY OF	PNR11483	463.0250	PS
	NASH, COUNTY OF	PNR11483	463.0500	PS
	NASH, COUNTY OF	PNR11483	463.0750	PS
	NASH, COUNTY OF	PNR11483	463.1000	PS
	NASH, COUNTY OF	PNR11483	463.1250	PS
	NASH, COUNTY OF	PNR11483	463.1500	PS
	NASH, COUNTY OF	PNR11483	463.1750	PS
ASHEBORO	NORTH CAROLINA, STATE OF	PND01291	867.8500	GF
COLUMBIA	TYRRELL, COUNTY OF	PND01679	154.1900	PF
CONCORD	NORTH CAROLINA, STATE OF	PND01270	42.5600	PP
DEEP RUN	LENOIR, COUNTY OF	PND01194	855.2375	GP
DEEP RUN	LENOIR, COUNTY OF	PND01194	855.9875	GP
DEEP RUN	LENOIR, COUNTY OF	PND01194	859.9875	GP
DENTON	DAVIDSON COUNTY FIREMENS ASSO	PND01331	154.4000	PF
DREXEL	TRIPLE COMMUNITY FIRE DEPT	PND01680	154.2800	PF
DREXEL	TRIPLE COMMUNITY FIRE DEPT	PND01680	154.3100	PF
DREXEL	TRIPLE COMMUNITY FIRE DEPT	PND01680	154.3550	PF
DREXEL	TRIPLE COMMUNITY FIRE DEPT	PND01680	154.3850	PF
EAST FLAT	HENDERSON COUNTY FIRE COMM	PND01259	154.1900	PF
EAST FLAT	HENDERSON COUNTY FIRE COMM	PND01259	154.2500	PF
EAST FLAT	HENDERSON COUNTY FIRE COMM	PND01259	154.2800	PF
EAST FLAT	HENDERSON COUNTY FIRE COMM	PND01259	154.3700	PF
EAST FLAT	HENDERSON COUNTY FIRE COMM	PND01259	154.4300	PF
ELIZABETH	NORTH CAROLINA, STATE OF	PND01270	42.5600	PP
ETOWAH	HENDERSON COUNTY FIRE COMM	PND01259	154.1900	PF
ETOWAH	HENDERSON COUNTY FIRE COMMI	PND01259	154.2500	PF
ETOWAH	HENDERSON COUNTY FIRE COMM	PND01259	154.2800	PF
ETOWAH	HENDERSON COUNTY FIRE COMM	PND01259	154.3700	PF
ETOWAH	HENDERSON COUNTY FIRE COMM	PND01259	154.4300	PF
FLETCHER	HENDERSON COUNTY FIRE COMM	PND01259	154.1900	PF
FLETCHER	HENDERSON COUNTY FIRE COMM	PND01259	154.2500	PF
FLETCHER	HENDERSON COUNTY FIRE COMM	PND01259	154.2800	PF
FLETCHER	HENDERSON COUNTY FIRE COMM	PND01259	154.3700	PF
FLETCHER	HENDERSON COUNTY FIRE COMM	PND01259	154.4300	PF
GREENVILLE	PITT, COUNTY OF	PNR11405	154.2800	PF
HENDERSONV	HENDERSON COUNTY FIRE COMM	PND01259	154.1900	PF
HENDERSONV	HENDERSON COUNTY FIRE COMM	PND01259	154.2500	PF
HENDERSONV	HENDERSON COUNTY FIRE COMM	PND01259	154.2800	PF
HENDERSONV	HENDERSON COUNTY FIRE COMM	PND01259	154.3100	PF
HENDERSONV	HENDERSON COUNTY FIRE COMM	PND01259	154.3700	PF
HENDERSONV	HENDERSON COUNTY FIRE COMM	PND01259	154.4300	PF
HENDERSONV	HENDERSON, COUNTY OF	PNA00001	151.0700	PL
HUNTERSVIL	NORTH CAROLINA, STATE OF	PND01270	42.5600	PP
KINSTON	LENOIR, COUNTY OF	PND01194	856.4625	YP
KINSTON	LENOIR, COUNTY OF	PND01194	856.9625	YP
KINSTON	LENOIR, COUNTY OF	PND01194	857.4625	YP
KINSTON	LENOIR, COUNTY OF	PND01194	857.9625	YP
KINSTON	LENOIR, COUNTY OF	PND01194	858.4625	YP
KINSTON	LENOIR, COUNTY OF	PND01194	858.9625	YP
KINSTON	LENOIR, COUNTY OF	PND01194	859.4625	YP
KINSTON	LENOIR, COUNTY OF	PND01194	859.9625	YP
KINSTON	LENOIR, COUNTY OF	PND01194	860.4625	YP
KINSTON	LENOIR, COUNTY OF	PND01194	860.9625	YP
LA GRANGE	LENOIR, COUNTY OF	PND01194	854.3625	GP
LA GRANGE	LENOIR, COUNTY OF	PND01194	857.9875	GP
LA GRANGE	LENOIR, COUNTY OF	PND01194	858.9875	GP
LEXINGTON	NORTH CAROLINA, STATE OF	PND01291	867.8500	GF
NASHVILLE	NASH, COUNTY OF	PNR11483	463.0000	PS
NASHVILLE	NASH, COUNTY OF	PNR11483	463.0250	PS
NASHVILLE	NASH, COUNTY OF	PNR11483	463.0500	PS
NASHVILLE	NASH, COUNTY OF	PNR11483	463.0750	PS
NASHVILLE	NASH, COUNTY OF	PNR11483	463.1000	PS
NASHVILLE	NASH, COUNTY OF	PNR11483	463.1250	PS
NASHVILLE	NASH, COUNTY OF	PNR11483	463.1500	PS
NASHVILLE	NASH, COUNTY OF	PNR11483	463.1750	PS
PINETOPS	PINETOPS, TOWN OF	PNR11633	154.8600	PP
SKYLAND	HENDERSON COUNTY FIRE COMM	PND01259	154.1900	PF
SKYLAND	HENDERSON COUNTY FIRE COMM	PND01259	154.2500	PF
SKYLAND	HENDERSON COUNTY FIRE COMM	PND01259	154.2800	PF
SKYLAND	HENDERSON COUNTY FIRE COMM	PND01259	154.3700	PF
SKYLAND	HENDERSON COUNTY FIRE COMM	PND01259	154.4300	PF
TUXEDO	HENDERSON COUNTY FIRE COMM	PND01259	154.1900	PF
TUXEDO	HENDERSON COUNTY FIRE COMM	PND01259	154.2500	PF

TUXEDO	HENDERSON COUNTY FIRE COMM	PND01259	154.2800	PF
TUXEDO	HENDERSON COUNTY FIRE COMM	PND01259	154.3700	PF
TUXEDO	HENDERSON COUNTY FIRE COMM	PND01259	154.4300	PF
WINSTON SA	AMERICAN NATIONAL RED CROSS	PNR11919	47.4200	PS
WINSTON SA	AMERICAN NATIONAL RED CROSS	PNR11919	463.1125	PS
ZEBULON	HOPKINS RURAL FIRE DEPARTMENT	PND01517	154.1450	PF
ZEBULON	HOPKINS RURAL FIRE DEPARTMENT	PND01517	154.1900	PF
ZEBULON	HOPKINS RURAL FIRE DEPARTMENT	PND01517	154.2950	PF

North Dakota

	EMMONS, COUNTY OF	PND01595	155.0250	PL
BISMARCK	BISMARCK, CITY OF	PNR11615	151.4300	PO
BISMARCK	NORTH DAKOTA, STATE OF	PND00495	151.0550	PH
DENHOFF	NORTH DAKOTA, STATE OF	PND00495	151.0550	PH
DRISCOLL	NORTH DAKOTA, STATE OF	PND00495	151.0550	PH
HANNOVER	NORTH DAKOTA, STATE OF	PND00495	151.0550	PH
LINTON	EMMONS, COUNTY OF	PND01595	155.0250	PL
NEW SALEM	NORTH DAKOTA, STATE OF	PND00495	151.0550	PH

Nebraska

ANGORA	REGIONAL WEST MECICAL CENTER	PNR11777	462.9500	PS
ANGORA	REGIONAL WEST MECICAL CENTER	PNR11777	462.9750	PS
ANGORA	REGIONAL WEST MECICAL CENTER	PNR11777	463.0000	PS
ANGORA	REGIONAL WEST MECICAL CENTER	PNR11777	463.0250	PS
ANGORA	REGIONAL WEST MECICAL CENTER	PNR11777	463.0500	PS
ANGORA	REGIONAL WEST MECICAL CENTER	PNR11777	463.0750	PS
ANGORA	REGIONAL WEST MECICAL CENTER	PNR11777	463.1000	PS
ANGORA	REGIONAL WEST MECICAL CENTER	PNR11777	463.1250	PS
ANGORA	REGIONAL WEST MECICAL CENTER	PNR11777	463.1500	PS
ANGORA	REGIONAL WEST MECICAL CENTER	PNR11777	463.1750	PS
LAKESIDE	HEART OF THE HILLS RURAL FIRE PR	PND01680	465.6250	PF
LINCOLN	NEBRASKA, STATE OF	PNR11769	155.0250	PL
SCOTTSBLUF	REGIONAL WEST MECICAL CENTER	PNR11777	462.9500	PS
SCOTTSBLUF	REGIONAL WEST MECICAL CENTER	PNR11777	462.9750	PS
SCOTTSBLUF	REGIONAL WEST MECICAL CENTER	PNR11777	463.0000	PS
SCOTTSBLUF	REGIONAL WEST MECICAL CENTER	PNR11777	463.0250	PS
SCOTTSBLUF	REGIONAL WEST MECICAL CENTER	PNR11777	463.0500	PS
SCOTTSBLUF	REGIONAL WEST MECICAL CENTER	PNR11777	463.0750	PS
SCOTTSBLUF	REGIONAL WEST MECICAL CENTER	PNR11777	463.1000	PS
SCOTTSBLUF	REGIONAL WEST MECICAL CENTER	PNR11777	463.1250	PS
SCOTTSBLUF	REGIONAL WEST MECICAL CENTER	PNR11777	463.1500	PS
SCOTTSBLUF	REGIONAL WEST MECICAL CENTER	PNR11777	463.1750	PS

New Hampshire

BELMONT	BELMONT, TOWN OF	PNR11430	33.9000	PF
MOULTONBOR	CARROLL, COUNTY OF	PNA00000	154.8600	GP
MOULTONBOR	CARROLL, COUNTY OF	PNA00000	154.8600	PP

New Jersey

	HELMETTA, BOROUGH OF	PND01266	33.6200	PF
	HELMETTA, BOROUGH OF	PND01266	33.8200	PF
	HELMETTA, BOROUGH OF	PND01266	33.9600	PF
	WOODCLIFF LAKE, BORO OF	PNR11767	153.7850	PL
	WOODCLIFF LAKE, BORO OF	PNR11767	153.9200	PL
	WOODCLIFF LAKE, BOROUGH OF	PNR10887	153.7850	PL
	WOODCLIFF LAKE, BOROUGH OF	PNR10887	153.9200	PL
BEDMINSTER	GARFIELD, CITY OF	PND02045	500.9375	PL
BEDMINSTER	GARFIELD, CITY OF	PND02045	502.4375	PL
BEDMINSTER	GARFIELD, CITY OF	PND02045	503.9125	PL
BEDMINSTER	GARFIELD, CITY OF	PND02045	503.9375	PL
BEDMINSTER	GARFIELD, CITY OF	PND02045	505.4375	PL
BEDMINSTER	GARFIELD, CITY OF	PND02045	505.5875	PL
BRIGEWATER	GARFIELD, CITY OF	PND02045	500.9125	PL
BRIGEWATER	GARFIELD, CITY OF	PND02045	502.5875	PL
BRIGEWATER	GARFIELD, CITY OF	PND02045	503.9125	PL
BRIGEWATER	GARFIELD, CITY OF	PND02045	505.5875	PL
CHESTER	WASHINGTON, TOWNSHIP OF	PND01174	151.3700	PP
CRANBURY	CRANBURY FIRE COMPANY INC	PNR11626	154.1750	PF
ELWOOD	NEW JERSEY, STATE OF	PND02039	463.9000	PL
FREEHOLD	MONMOUTH OCEAN HOSPITAL	PND01516	462.9500	PM
FREEHOLD	MONMOUTH OCEAN HOSPITAL	PND01516	462.9750	PM
FREEHOLD	MONMOUTH OCEAN HOSPITAL	PND01516	463.0000	PM
FREEHOLD	MONMOUTH OCEAN HOSPITAL	PND01516	463.0250	PM
FREEHOLD	MONMOUTH OCEAN HOSPITAL	PND01516	463.0500	PM
FREEHOLD	MONMOUTH OCEAN HOSPITAL	PND01516	463.0750	PM
FREEHOLD	MONMOUTH OCEAN HOSPITAL	PND01516	463.1000	PM
FREEHOLD	MONMOUTH OCEAN HOSPITAL	PND01516	463.1250	PM
FREEHOLD	MONMOUTH OCEAN HOSPITAL	PND01516	463.1500	PM
FREEHOLD	MONMOUTH OCEAN HOSPITAL	PND01516	463.1750	PM
GARFIELD	GARFIELD, CITY OF	PND02045	500.7875	PL
GARFIELD	GARFIELD, CITY OF	PND02045	501.5125	PL
GARFIELD	GARFIELD, CITY OF	PND02045	501.5875	PL
GARFIELD	GARFIELD, CITY OF	PND02045	503.7875	PL
GARFIELD	GARFIELD, CITY OF	PND02045	504.5125	PL
GARFIELD	GARFIELD, CITY OF	PND02045	504.5875	PL
HANOVER TO	HANOVER, TOWNSHIP OF	PN415848	501.3875	PL
HANOVER TO	HANOVER, TOWNSHIP OF	PN415848	501.7125	PL
HANOVER TO	HANOVER, TOWNSHIP OF	PN415848	504.3875	PL
HANOVER TO	HANOVER, TOWNSHIP OF	PN415848	504.7125	PL
HELMETTA	HELMETTA, BOROUGH OF	PND01266	33.8200	PF
HELMETTA	HELMETTA, BOROUGH OF	PND01266	33.9600	PF
HOLMDEL	MONMOUTH OCEAN HOSPITAL SVCS	PND01516	463.0000	PM
HOLMDEL	MONMOUTH OCEAN HOSPITAL SVCS	PND01516	463.0250	PM
HOLMDEL	MONMOUTH OCEAN HOSPITAL SVCS	PND01516	463.0500	PM
HOLMDEL	MONMOUTH OCEAN HOSPITAL SVCS	PND01516	463.0750	PM
HOLMDEL	MONMOUTH OCEAN HOSPITAL SVCS	PND01516	463.1000	PM
HOLMDEL	MONMOUTH OCEAN HOSPITAL SVCS	PND01516	463.1250	PM
HOLMDEL	MONMOUTH OCEAN HOSPITAL SVCS	PND01516	463.1500	PM
HOLMDEL	MONMOUTH OCEAN HOSPITAL SVCS	PND01516	463.1750	PM
HOWELL	HOWELL, TOWNSHIP OF	PNR11302	866.1125	GF
LAKEWOOD	MONMOUTH OCEAN HOSPITAL SVCS	PND01516	463.0000	PM
LAKEWOOD	MONMOUTH OCEAN HOSPITAL SVCS	PND01516	463.0250	PM
LAKEWOOD	MONMOUTH OCEAN HOSPITAL SVCS	PND01516	463.0500	PM
LAKEWOOD	MONMOUTH OCEAN HOSPITAL SVCS	PND01516	463.0750	PM
LAKEWOOD	MONMOUTH OCEAN HOSPITAL SVCS	PND01516	463.1000	PM
LAKEWOOD	MONMOUTH OCEAN HOSPITAL SVCS	PND01516	463.1250	PM
LAKEWOOD	MONMOUTH OCEAN HOSPITAL SVCS	PND01516	463.1500	PM
LAKEWOOD	MONMOUTH OCEAN HOSPITAL SVCS	PND01516	463.1750	PM
LAWRENCEVI	EWING LAWRENCE SEWER AUTHORIT	PNA00000	154.9950	PL
LONG BRANC	MONMOUTH OCEAN HOSPITAL SVCS	PND01516	462.9500	PM
LONG BRANC	MONMOUTH OCEAN HOSPITAL SVCS	PND01516	462.9750	PM
LONG BRANC	MONMOUTH OCEAN HOSPITAL SVCS	PND01516	463.0000	PM
LONG BRANC	MONMOUTH OCEAN HOSPITAL SVCS	PND01516	463.0250	PM
LONG BRANC	MONMOUTH OCEAN HOSPITAL SVCS	PND01516	463.0500	PM
LONG BRANC	MONMOUTH OCEAN HOSPITAL SVCS	PND01516	463.0750	PM
LONG BRANC	MONMOUTH OCEAN HOSPITAL SVCS	PND01516	463.1000	PM
LONG BRANC	MONMOUTH OCEAN HOSPITAL SVCS	PND01516	463.1250	PM
LONG BRANC	MONMOUTH OCEAN HOSPITAL SVCS	PND01516	463.1500	PM
LONG BRANC	MONMOUTH OCEAN HOSPITAL SVCS	PND01516	463.1750	PM
MARLBORO	MARLBORO, TOWNSHIP OF	PNR11704	39.4600	PP
MARLBORO	MARLBORO, TOWNSHIP OF	PNR11704	154.6800	PP
MARLBORO	MARLBORO, TOWNSHIP OF	PNR11704	154.7400	PP
MARLBORO	MARLBORO, TOWNSHIP OF	PNR11704	154.8750	PP
METUCHEN	METUCHEN, BOROUGH OF	PND01267	154.6800	PP
METUCHEN	METUCHEN, BOROUGH OF	PND01267	155.0100	PP
NEPTUNE	MONMOUTH OCEAN HOS SVCSS	PND01516	462.9500	PM
NEPTUNE	MONMOUTH OCEAN HOS SERVICES	PND01516	462.9750	PM
NEPTUNE	MONMOUTH OCEAN HOS SERVICES	PND01516	463.0000	PM
NEPTUNE	MONMOUTH OCEAN HOS SERVICES	PND01516	463.0250	PM
NEPTUNE	MONMOUTH OCEAN HOS SERVICES	PND01516	463.0500	PM
NEPTUNE	MONMOUTH OCEAN HOS SERVICES	PND01516	463.0750	PM
NEPTUNE	MONMOUTH OCEAN HOS SERVICES	PND01516	463.1000	PM
NEPTUNE	MONMOUTH OCEAN HOS SERVICES	PND01516	463.1250	PM
NEPTUNE	MONMOUTH OCEAN HOS SERVICES	PND01516	463.1500	PM
NEPTUNE	MONMOUTH OCEAN HOS SERVICES	PND01516	463.1750	PM
OLD BRIDGE	OLD BRIDGE, TOWNSHIP OF	PNR11566	866.8625	YF
OLD BRIDGE	OLD BRIDGE, TOWNSHIP OF	PNR11566	867.1375	YF
OLD BRIDGE	OLD BRIDGE, TOWNSHIP OF	PNR11566	867.2750	YF
OLD BRIDGE	OLD BRIDGE, TOWNSHIP OF	PNR11566	867.9375	YF
ORANGE	ORANGE, CITY OF	PND01279	501.2625	PL
ORANGE	ORANGE, CITY OF	PND01279	501.7375	PL
ORANGE	ORANGE, CITY OF	PND01279	504.2625	PL
ORANGE	ORANGE, CITY OF	PND01279	504.7375	PL
POTTERSVIL	BEDMINSTER, TOWNSHIP OF	PNR11327	33.7400	PF
POTTERSVIL	BEDMINSTER, TOWNSHIP OF	PNR11327	33.9400	PF
PRINCETON	PRINCETON, BOROUGH OF	PNR11227	153.9350	PL
RED BANK	MONMOUTH OCEAN HOS SERVICES	PND01516	463.0000	PM
RED BANK	MONMOUTH OCEAN HOS SERVICES	PND01516	463.0250	PM
RED BANK	MONMOUTH OCEAN HOS SERVICES	PND01516	463.0500	PM
RED BANK	MONMOUTH OCEAN HOS SERVICES	PND01516	463.0750	PM
RED BANK	MONMOUTH OCEAN HOS SERVICES	PND01516	463.1000	PM
RED BANK	MONMOUTH OCEAN HOS SERVICES	PND01516	463.1250	PM
RED BANK	MONMOUTH OCEAN HOS SERVICES	PND01516	463.1500	PM
RED BANK	MONMOUTH OCEAN HOS SERVICES	PND01516	463.1750	PM
RINGWOOD	CENTER FOR FAMILY RESOURCES INC	PND01658	45.9200	PS
SALEM	SALEM, COUNTY OF	PND01298	855.9625	GP
STONE HARB	STONE HARBOR, BOROUGH OF	PND02005	154.1300	PF
STONE HARB	STONE HARBOR, BOROUGH OF	PND02005	154.1900	PF
WOODCLIFF	WOODCLIFF LAKE, CITY OF	PNR11766	155.1300	PP

New Mexico

	MC KINLEY, COUNTY OF	PNR11564	153.8900	PF
	MC KINLEY, COUNTY OF	PNR11564	154.3100	PF
	MC KINLEY, COUNTY OF	PNR11564	154.4000	PF
	MC KINLEY, COUNTY OF	PNR11564	154.4150	PF
ABIQUIU	ABIQUIU FIRE DISTRICT	PND01266	154.3100	PF
ABIQUIU	ABIQUIU FIRE DISTRICT	PND01266	154.3550	PF
APACHE CRE	NEW MEXICO, STATE OF	PNA00003	154.9200	PP
JEMEZ SPRI	NEW MEXICO, STATE OF	PND01525	462.9500	PM
JEMEZ SPRI	NEW MEXICO, STATE OF	PND01525	462.9750	PM
JEMEZ SPRI	NEW MEXICO, STATE OF	PND01525	463.0000	PM
JEMEZ SPRI	NEW MEXICO, STATE OF	PND01525	463.0250	PM
JEMEZ SPRI	NEW MEXICO, STATE OF	PND01525	463.0500	PM
JEMEZ SPRI	NEW MEXICO, STATE OF	PND01525	463.0750	PM
JEMEZ SPRI	NEW MEXICO, STATE OF	PND01525	463.1000	PM
JEMEZ SPRI	NEW MEXICO, STATE OF	PND01525	463.1250	PM
JEMEZ SPRI	NEW MEXICO, STATE OF	PND01525	463.1500	PM
JEMEZ SPRI	NEW MEXICO, STATE OF	PND01525	463.1750	PM
LOS ALAMOS	LOS ALAMOS AUXILLIARY FIRE BRIDG	PND02004	154.4450	PF
MEDANALES	ABIQUIU FIRE DISTRICT	PND01266	154.3100	PF
MEDANALES	ABIQUIU FIRE DISTRICT	PND01266	154.3550	PF
PREWITT	MC KINLEY, COUNTY OF	PNR11564	154.3100	PF
PREWITT	MC KINLEY, COUNTY OF	PNR11564	154.4000	PF
PREWITT	MC KINLEY, COUNTY OF	PNR11564	154.4150	PF
SILVER CIT	NEW MEXICO, STATE OF	PND01525	462.9500	PM
SILVER CIT	NEW MEXICO, STATE OF	PND01525	462.9750	PM
SILVER CIT	NEW MEXICO, STATE OF	PND01525	463.0000	PM
SILVER CIT	NEW MEXICO, STATE OF	PND01525	463.0250	PM
SILVER CIT	NEW MEXICO, STATE OF	PND01525	463.0500	PM
SILVER CIT	NEW MEXICO, STATE OF	PND01525	463.0750	PM
SILVER CIT	NEW MEXICO, STATE OF	PND01525	463.1000	PM

SILVER CIT	NEW MEXICO, STATE OF	PND01525	463.1250	PM
SILVER CIT	NEW MEXICO, STATE OF	PND01525	463.1500	PM
SILVER CIT	NEW MEXICO, STATE OF	PND01525	463.1750	PM
SILVER CIT	SAPPILLO CREEK VOLUNTEER FIRE &	PND01524	153.7700	PF
SILVER CIT	SAPPILLO CREEK VOLUNTEER FIRE &	PND01524	154.3700	PF
THOREAU	MC KINLEY, COUNTY OF	PNR11564	154.3100	PF
THOREAU	MC KINLEY, COUNTY OF	PNR11564	154.4000	PF
THOREAU	MC KINLEY, COUNTY OF	PNR11564	154.4150	PF

Nevada

	FALLON, CITY OF	PND02040	39.9000	PL
LAS VEGAS	SUNRISE MOUNTAINVIEW MED CEN	PND01698	152.0075	PS
NIXON	YERINGTON, CITY OF	PND02041	153.8600	PP
SUTCLIFFE	PYRAMID LAKE FISHERIES	PND02042	154.7850	PP

New York

	ALBANY, COUNTY OF	PNR11633	39.0600	PL
	AUGUST, TOWN OF	PNR11486	154.0550	PL
	BEEKMAN FIRE DISTRICT	PND01249	45.8800	PF
	BEEKMAN FIRE DISTRICT	PND01249	46.3000	PF
	BEEKMAN FIRE DISTRICT	PND01249	46.4200	PF
	BEEKMAN FIRE DISTRICT	PND01249	46.5000	PF
	CORTLAND, COUNTY OF	PNR11897	45.8800	PF
	CORTLAND, COUNTY OF	PNR11897	46.0800	PF
	CORTLAND, COUNTY OF	PNR11897	46.2200	PF
	CORTLAND, COUNTY OF	PNR11897	46.2800	PF
	CORTLAND, COUNTY OF	PNR11897	46.3000	PF
	FAYETTEVILLE, CITY OF	PND00021	46.3400	PF
	FAYETTEVILLE, CITY OF	PND00021	465.6250	PF
	PULTENEY, TOWN OF	PND00172	45.4800	PL
	TOMPKINS, COUNTY OF	PNR11767	463.0000	PS
	TOMPKINS, COUNTY OF	PNR11767	463.0250	PS
	TOMPKINS, COUNTY OF	PNR11767	463.0500	PS
	TOMPKINS, COUNTY OF	PNR11767	463.0750	PS
	TOMPKINS, COUNTY OF	PNR11767	463.1000	PS
	TOMPKINS, COUNTY OF	PNR11767	463.1250	PS
	TOMPKINS, COUNTY OF	PNR11767	463.1500	PS
	TOMPKINS, COUNTY OF	PNR11767	463.1750	PS
AKRON	NIAGARA, COUNTY	PN216012	46.0600	PF
AUBURN	AUBURN, CITY OF	PND01193	866.0125	GF
AUBURN	AUBURN, CITY OF	PND01193	866.5125	GF
AUBURN	AUBURN, CITY OF	PND01193	868.0125	GF
AUBURN	AUBURN, CITY OF	PND01193	868.2125	YF
AUBURN	AUBURN, CITY OF	PND01193	868.4375	YF
AUBURN	AUBURN, CITY OF	PND01193	868.5750	YF
AUBURN	AUBURN, CITY OF	PND01193	868.7500	YF
AUBURN	AUBURN, CITY OF	PND01193	868.8000	YF
AUBURN	AUBURN, CITY OF	PND01193	868.8625	YF
AUBURN	AUBURN, CITY OF	PND01193	868.8875	YF
AUBURN	AUBURN, CITY OF	PND01193	868.9125	YF
AUBURN	AUBURN, CITY OF	PND01193	868.9875	YF
AUSTERLITZ	BEEKMAN FIRE DISTRICT	PND01249	46.4200	PF
AUSTERLITZ	BEEKMAN FIRE DISTRICT	PND01249	46.5000	PF
BLACK RIVE	GUILFOYLE AMBULANCE SERVICE INC	PN214682	150.7750	PM
BLAUVELT	BLAUVELT VOLUNTEER FIRE CO INC	PND01517	46.0800	PF
BLAUVELT	BLAUVELT VOLUNTEER FIRE CO INC	PND01517	46.1800	PF
BLAUVELT	BLAUVELT VOLUNTEER FIRE CO INC	PND01517	46.3000	PF
BLAUVELT	BLAUVELT VOLUNTEER FIRE CO INC	PND01517	46.3200	PF
BLAUVELT	BLAUVELT VOLUNTEER FIRE CO INC	PND01517	46.3600	PF
BLAUVELT	BLAUVELT VOLUNTEER FIRE CO INC	PND01517	46.4800	PF
BOSTON	ERIE COUNTY WATER AUTHORITY	PND01299	853.0125	GP
CATSKILL	GREENE, COUNTY OF	PND01598	151.0250	PH
DANBY	TOMPKINS, COUNTY OF	PNR11767	462.9500	PS
DANBY	TOMPKINS, COUNTY OF	PNR11767	462.9750	PS
DANBY	TOMPKINS, COUNTY OF	PNR11767	463.0000	PS
DANBY	TOMPKINS, COUNTY OF	PNR11767	463.0250	PS
DANBY	TOMPKINS, COUNTY OF	PNR11767	463.0500	PS
DANBY	TOMPKINS, COUNTY OF	PNR11767	463.0750	PS
DANBY	TOMPKINS, COUNTY OF	PNR11767	463.1000	PS
DANBY	TOMPKINS, COUNTY OF	PNR11767	463.1250	PS
DANBY	TOMPKINS, COUNTY OF	PNR11767	463.1500	PS
DANBY	TOMPKINS, COUNTY OF	PNR11767	463.1750	PS
DRYDEN	TOMPKINS, COUNTY OF	PNR11767	462.9500	PS
DRYDEN	TOMPKINS, COUNTY OF	PNR11767	462.9750	PS
DRYDEN	TOMPKINS, COUNTY OF	PNR11767	463.0000	PS
DRYDEN	TOMPKINS, COUNTY OF	PNR11767	463.0250	PS
DRYDEN	TOMPKINS, COUNTY OF	PNR11767	463.0500	PS
DRYDEN	TOMPKINS, COUNTY OF	PNR11767	463.0750	PS
DRYDEN	TOMPKINS, COUNTY OF	PNR11767	463.1000	PS
DRYDEN	TOMPKINS, COUNTY OF	PNR11767	463.1250	PS
DRYDEN	TOMPKINS, COUNTY OF	PNR11767	463.1500	PS
DRYDEN	TOMPKINS, COUNTY OF	PNR11767	463.1750	PS
FARMINGDAL	BRONCO BUS CORPORATION	PND01232	47.5400	PS
FISHKILL	FISHKILL, TOWN OF	PND01595	154.8300	PP
GHENT	ESTATE OF MORRIS LEVY	PND01570	152.9150	IS
LARCHMONT	FISHKILL, TOWN OF	PND01595	45.5600	PL
LIVINGSTON	BEEKMAN FIRE DISTRICT	PND01249	45.8800	PF
LIVINGSTON	BEEKMAN FIRE DISTRICT	PND01249	46.4200	PF
LIVINGSTON	BEEKMAN FIRE DISTRICT	PND01249	46.5000	PF
MAMARONECK	FISHKILL, TOWN OF	PND01595	45.5600	PL
NEW LEBANO	BEEKMAN FIRE DISTRICT	PND01249	46.5000	PF
NEWFIELD	TOMPKINS, COUNTY OF	PNR11767	462.9500	PS
NEWFIELD	TOMPKINS, COUNTY OF	PNR11767	462.9750	PS
NEWFIELD	TOMPKINS, COUNTY OF	PNR11767	463.0000	PS
NEWFIELD	TOMPKINS, COUNTY OF	PNR11767	463.0250	PS
NEWFIELD	TOMPKINS, COUNTY OF	PNR11767	463.0500	PS
NEWFIELD	TOMPKINS, COUNTY OF	PNR11767	463.0750	PS
NEWFIELD	TOMPKINS, COUNTY OF	PNR11767	463.1000	PS
NEWFIELD	TOMPKINS, COUNTY OF	PNR11767	463.1250	PS
NEWFIELD	TOMPKINS, COUNTY OF	PNR11767	463.1750	PS
ORISKANY F	AUGUST, TOWN OF	PNR11486	154.0550	PL
PLANDOME	PLANDOME, VILLAGE OF	PNR10889	46.1000	PF
PLANDOME	PLANDOME, VILLAGE OF	PNR10889	46.1200	PF
PUTNAM VAL	NEW YORK, STATE OF	PND02044	154.8150	PP
SCARSDALE	SCARSDALE, VILLAGE OF	PNR11484	867.6125	GF
SENNETT	AUBURN, CITY OF	PND01193	866.0125	GF
SENNETT	AUBURN, CITY OF	PND01193	866.5125	GF
SENNETT	AUBURN, CITY OF	PND01193	868.0125	GF
SENNETT	AUBURN, CITY OF	PND01193	868.2125	YF
SENNETT	AUBURN, CITY OF	PND01193	868.5750	YF
SENNETT	AUBURN, CITY OF	PND01193	868.7500	YF
SENNETT	AUBURN, CITY OF	PND01193	868.8000	YF
SOLON	CORTLAND, COUNTY OF	PNR11897	46.0800	PF
SOLON	CORTLAND, COUNTY OF	PNR11897	46.2200	PF
SOLON	CORTLAND, COUNTY OF	PNR11897	46.3000	PF
SYRACUSE	SYRACUSE, CITY OF	PND01298	851.4875	GP
THORNWOOD	ROYAL COACH LINES INC	PND01514	33.0200	PS
TRUMANSBUR	TOMPKINS, COUNTY OF	PNR11767	462.9500	PS
TRUMANSBUR	TOMPKINS, COUNTY OF	PNR11767	462.9750	PS
TRUMANSBUR	TOMPKINS, COUNTY OF	PNR11767	463.0000	PS
TRUMANSBUR	TOMPKINS, COUNTY OF	PNR11767	463.0250	PS
TRUMANSBUR	TOMPKINS, COUNTY OF	PNR11767	463.0500	PS
TRUMANSBUR	TOMPKINS, COUNTY OF	PNR11767	463.0750	PS
TRUMANSBUR	TOMPKINS, COUNTY OF	PNR11767	463.1000	PS
TRUMANSBUR	TOMPKINS, COUNTY OF	PNR11767	463.1250	PS
TRUMANSBUR	TOMPKINS, COUNTY OF	PNR11767	463.1500	PS
TRUMANSBUR	TOMPKINS, COUNTY OF	PNR11767	463.1750	PS
VIRGIL	CORTLAND, COUNTY OF	PNR11897	45.8800	PF
VIRGIL	CORTLAND, COUNTY OF	PNR11897	46.0800	PF
VIRGIL	CORTLAND, COUNTY OF	PNR11897	46.2200	PF
VIRGIL	CORTLAND, COUNTY OF	PNR11897	46.3000	PF
WAPPINGERS	SLOPER WILLEN COMM AMBULANC	PND01681	47.5000	PM
WAPPINGERS	SLOPER WILLEN COMM AMBULANC	PND01681	47.5400	PM
WAPPINGERS	SLOPER WILLEN COMM AMBULANC	PND01681	462.9500	PM
WAPPINGERS	SLOPER WILLEN COMM AMBULANC	PND01681	462.9750	PM
WAPPINGERS	SLOPER WILLEN COMM AMBULANC	PND01681	463.0000	PM
WAPPINGERS	SLOPER WILLEN COMM AMBULANC	PND01681	463.0250	PM
WAPPINGERS	SLOPER WILLEN COMM AMBULANC	PND01681	463.0500	PM
WAPPINGERS	SLOPER WILLEN COMM AMBULANC	PND01681	463.0750	PM
WAPPINGERS	SLOPER WILLEN COMM AMBULANC	PND01681	463.1000	PM
WAPPINGERS	SLOPER WILLEN COMM AMBULANC	PND01681	463.1250	PM
WAPPINGERS	SLOPER WILLEN COMM AMBULANC	PND01681	463.1500	PM
WAPPINGERS	SLOPER WILLEN COMM AMBULANC	PND01681	463.1750	PM
YORKTOWN	YORKTOWN VOLUN AMBULANCE COR	PND01526	463.1875	PS
YORKTOWN	YORKTOWN VOLUN AMBULANCE COR	PND01526	468.1875	PS

Ohio

	DAYTON, CITY OF	PNR11875	856.2125	YP
	DAYTON, CITY OF	PNR11875	856.4625	YP
	DAYTON, CITY OF	PNR11875	856.7125	YP
	DAYTON, CITY OF	PNR11875	856.9625	YP
	DAYTON, CITY OF	PNR11875	857.2125	YP
	DAYTON, CITY OF	PNR11875	857.4625	YP
	DAYTON, CITY OF	PNR11875	857.7125	YP
	DAYTON, CITY OF	PNR11875	857.9625	YP
	DAYTON, CITY OF	PNR11875	858.2125	YP
	DAYTON, CITY OF	PNR11875	858.4625	YP
	DAYTON, CITY OF	PNR11875	858.7125	YP
	DAYTON, CITY OF	PNR11875	858.9625	YP
	DAYTON, CITY OF	PNR11875	859.2125	YP
	DAYTON, CITY OF	PNR11875	859.4625	YP
	DAYTON, CITY OF	PNR11875	859.7125	YP
	DAYTON, CITY OF	PNR11875	859.9625	YP
	DAYTON, CITY OF	PNR11875	860.2125	YP
	DAYTON, CITY OF	PNR11875	860.4625	YP
	DAYTON, CITY OF	PNR11875	860.7125	YP
	DAYTON, CITY OF	PNR11875	860.9625	YP
	JEFFERSON, CITY OF	PNR11614	154.1300	PF
	JEFFERSON, CITY OF	PNR11614	154.2050	PF
	JEFFERSON, CITY OF	PNR11614	154.2800	PF
	MIAMI TOWNSHIP FIRE & EMS	PND01266	462.9500	PM
	MIAMI TOWNSHIP FIRE & EMS	PND01266	463.0000	PM
	MIAMI TOWNSHIP FIRE & EMS	PND01266	463.0250	PM
	MIAMI TOWNSHIP FIRE & EMS	PND01266	463.0500	PM
	MIAMI TOWNSHIP FIRE & EMS	PND01266	463.0750	PM
	MIAMI TOWNSHIP FIRE & EMS	PND01266	463.1000	PM
	MIAMI TOWNSHIP FIRE & EMS	PND01266	463.1250	PM
	MIAMI TOWNSHIP FIRE & EMS	PND01266	463.1500	PM
	MIAMI TOWNSHIP FIRE & EMS	PND01266	463.1750	PM
	SHAKER HEIGHTS, CITY OF	PNR11634	39.3400	PP
	SHAKER HEIGHTS, CITY OF	PNR11634	39.5800	PP
	SHAKER HEIGHTS, CITY OF	PNR11634	39.6000	PP
	SHAKER HEIGHTS, CITY OF	PNR11634	39.7400	PP
	SHAKER HEIGHTS, CITY OF	PNR11634	39.8000	PP
	SOLON, CITY OF	PNA00001	465.2375	PP
AKRON	SUMMIT, COUNTY OF	PND01692	852.3125	YP
AKRON	SUMMIT, COUNTY OF	PND01692	853.3875	YP
AKRON	SUMMIT, COUNTY OF	PND01692	854.3125	YP
ANTRIM	ANTRIM COMMUNITY FIRE DEPT	PND01698	33.9000	PF

ANTRIM	ANTRIM COMMUNITY FIRE DEPT	PND01698	33.9400	PF
ASHLAND	SMITHFIELD, VILLAGE OF	PND01655	151.1000	PH
CAMBRIDGE	GUERNSEY, COUNTY OF	PND01263	39.2600	PP
CAMBRIDGE	GUERNSEY, COUNTY OF	PND01263	39.3600	PP
CAMBRIDGE	GUERNSEY, COUNTY OF	PND01263	39.5800	PP
CAMBRIDGE	GUERNSEY, COUNTY OF	PND01263	154.6500	PP
CAMBRIDGE	GUERNSEY, COUNTY OF	PND01263	154.8300	PP
CAMBRIDGE	OHIO, STATE OF	PND01118	44.9400	PP
CAMBRIDGE	OHIO, STATE OF	PND01118	45.0200	PP
CAMBRIDGE	OHIO, STATE OF	PND01118	45.1000	PP
CAMBRIDGE	OHIO, STATE OF	PND01118	154.6800	PP
CAMBRIDGE	OHIO, STATE OF	PND01118	154.9350	PP
CHILLICOTH	SCIOTO, TOWNSHIP OF	PNR11405	154.2500	PF
DAYTON	DAYTON, CITY OF	PNR11875	856.2125	YP
DAYTON	DAYTON, CITY OF	PNR11875	856.4625	YP
DAYTON	DAYTON, CITY OF	PNR11875	856.7125	YP
DAYTON	DAYTON, CITY OF	PNR11875	856.9625	YP
DAYTON	DAYTON, CITY OF	PNR11875	857.2125	YP
DAYTON	DAYTON, CITY OF	PNR11875	857.4625	YP
DAYTON	DAYTON, CITY OF	PNR11875	857.7125	YP
DAYTON	DAYTON, CITY OF	PNR11875	857.9625	YP
DAYTON	DAYTON, CITY OF	PNR11875	858.2125	YP
DAYTON	DAYTON, CITY OF	PNR11875	858.4625	YP
DAYTON	DAYTON, CITY OF	PNR11875	858.7125	YP
DAYTON	DAYTON, CITY OF	PNR11875	858.9625	YP
DAYTON	DAYTON, CITY OF	PNR11875	859.2125	YP
DAYTON	DAYTON, CITY OF	PNR11875	859.4625	YP
DAYTON	DAYTON, CITY OF	PNR11875	859.7125	YP
DAYTON	DAYTON, CITY OF	PNR11875	859.9625	YP
DAYTON	DAYTON, CITY OF	PNR11875	860.2125	YP
DAYTON	DAYTON, CITY OF	PNR11875	860.4625	YP
DAYTON	DAYTON, CITY OF	PNR11875	860.7125	YP
DAYTON	DAYTON, CITY OF	PNR11875	860.9625	YP
DAYTON	RIVERSIDE, CITY OF	PNR11552	46.4200	PF
DAYTON	RIVERSIDE, CITY OF	PNR11552	154.2800	PF
INDEPENDEN	INDEPENDENCE, CITY OF	PNR11834	39.5800	PP
INDEPENDEN	INDEPENDENCE, CITY OF	PNR11834	151.3400	PP
JEFFERSON	JEFFERSON, CITY OF	PNR11614	154.1300	PF
JEFFERSON	JEFFERSON, CITY OF	PNR11614	154.2050	PF
JEFFERSON	JEFFERSON, CITY OF	PNR11614	154.2800	PF
LEWISVILLE	OHIO, STATE OF	PND01118	44.9400	PP
LONDON	MADISON, COUNTY OF	PNR11409	39.5800	PP
LONDON	MADISON, COUNTY OF	PNR11409	154.8150	PP
MC ARTHUR	MC ARTHUR, VILLAGE OF	PND01679	465.6000	PF
MONROE	MONROE, MUNICIPALITY OF	PND01602	154.8450	PL
NEWCOMERST	NEWCOMERSTOWN, VILLAGE OF	PNR11329	155.0250	PL
OAK HILL	MADISON JEFFERSON JOINT FIRE DIS	PND02004	33.7400	PF
OTTAWA	OHIO, STATE OF	PNR11603	47.1200	PH
OTTAWA	OHIO, STATE OF	PNR11603	47.2200	PH
OTTAWA	OHIO, STATE OF	PNR11603	47.3400	PH
PAULDING	OHIO, STATE OF	PNR11602	47.1200	PH
PAULDING	OHIO, STATE OF	PNR11602	47.2200	PH
PAULDING	OHIO, STATE OF	PNR11602	47.3400	PH
RICHFIELD	SUMMIT, COUNTY OF	PND01692	854.3125	YP
ROCHESTER	ROCHESTER, TOWNSHIP OF	PN213971	154.2800	PF
ROCHESTER	ROCHESTER, TOWNSHIP OF	PN213971	154.3700	PF
SHAKER HEI	SHAKER HEIGHTS, CITY OF	PNR11634	39.5800	PP
SHAKER HEI	SHAKER HEIGHTS, CITY OF	PNR11634	39.6000	PP
SHAKER HEI	SHAKER HEIGHTS, CITY OF	PNR11634	39.8000	PP
UPPER SAND	OHIO, STATE OF	PND01965	47.1200	PH
UPPER SAND	OHIO, STATE OF	PND01965	47.2200	PH
UPPER SAND	OHIO, STATE OF	PND01965	47.3400	PH
WAVERLY	PIKE, COUNTY OF	PND01601	39.5800	PP
WAVERLY	PIKE, COUNTY OF	PND01601	39.6600	PP
WAVERLY	PIKE, COUNTY OF	PND01601	39.7200	PP
WAVERLY	PIKE, COUNTY OF	PND01601	39.7800	PP
WEST SALEM	WEST SALEM, VILLAGE OF	PN365307	154.4712	IW
WHITE COTT	NEWTON, TOWNSHIP OF	PND01273	154.0550	PL
ZANESVILLE	MUSKINGUM, COUNTY OF	PND01515	33.9800	PF
ZANESVILLE	MUSKINGUM, COUNTY OF	PND01515	154.3850	PF

Oklahoma

	SPAVINAW, CITY OF	PNR11831	154.3850	PF
GUTHRIE	SOONER VOLUNTEER FIRE DEPT	PND01331	154.1300	PF
GUTHRIE	SOONER VOLUNTEER FIRE DEPT	PND01331	154.2950	PF
MEDFORD	GRANT, COUNTY OF	PND01271	155.0100	PP
OKLAHOMA C	OKLAHOMA, COUNTY OF	PND02040	151.4450	PL
PONCA CITY	RANCH DRIVE VOL FIRE DEPT	PND01515	154.1300	PF
PONCA CITY	RANCH DRIVE VOL FIRE DEPT	PND01515	154.2800	PF
WALTERS	OKLAHOMA, COUNTY OF	PND02040	151.0550	PP

Oregon

	DESCHUTES VALLEY WATER DIST	PND01298	857.9875	GP
	NORTH BEND, CITY OF	PNR11450	153.8450	PL
	PHILOMATH, CITY OF	PNR11495	154.0850	PL
	UNIFIED SEWERAGE AGENCY	PND01297	851.5875	GP
BRIGHTWOOD	CLACKAMAS, COUNTY OF	PND01515	153.8900	PF
BRIGHTWOOD	CLACKAMAS, COUNTY OF	PND01515	154.1900	PF
BRIGHTWOOD	CLACKAMAS, COUNTY OF	PND01515	154.2200	PF
BRIGHTWOOD	CLACKAMAS, COUNTY OF	PND01515	154.2800	PF
BRIGHTWOOD	CLACKAMAS, COUNTY OF	PND01515	154.3250	PF
COOS BAY	MILLINGTON RURAL FIRE PROT	PND01518	154.3100	PF
COOS BAY	MILLINGTON RURAL FIRE PROT	PND01518	154.4300	PF
GRANTS PAS	GRANTS PASS, CITY OF	PND02041	155.0100	PP
GROVE	WASHINGTON, COUNTY OF	PNR11959	854.9875	YP
GROVE	WASHINGTON, COUNTY OF	PNR11959	855.2125	YP
GROVE	WASHINGTON, COUNTY OF	PNR11959	855.2375	YP
GROVE	WASHINGTON, COUNTY OF	PNR11959	855.4625	YP
GROVE	WASHINGTON, COUNTY OF	PNR11959	855.4875	YP
GROVE	WASHINGTON, COUNTY OF	PNR11959	855.7125	YP
GROVE	WASHINGTON, COUNTY OF	PNR11959	855.7375	YP
GROVE	WASHINGTON, COUNTY OF	PNR11959	855.9625	YP
GROVE	WASHINGTON, COUNTY OF	PNR11959	856.2375	YP
GROVE	WASHINGTON, COUNTY OF	PNR11959	857.2375	YP
GROVE	WASHINGTON, COUNTY OF	PNR11959	858.2375	YP
GROVE	WASHINGTON, COUNTY OF	PNR11959	859.2375	YP
GROVE	WASHINGTON, COUNTY OF	PNR11959	859.7375	YP
GROVE	WASHINGTON, COUNTY OF	PNR11959	860.2375	YP
GROVE	WASHINGTON, COUNTY OF	PNR11959	860.7375	YP
HILLSBORO	UNIFIED SEWERAGE AGENCY	PND01297	851.5875	GP
JEFFERSON	JEFFERSON RURAL FIRE PROT DIST	PNR11303	153.7700	PF
JEFFERSON	JEFFERSON RURAL FIRE PROT DIST	PNR11303	154.1600	PF
JEFFERSON	JEFFERSON RURAL FIRE PROT DIST	PNR11303	154.2800	PF
JEFFERSON	JEFFERSON RURAL FIRE PROT DIST	PNR11303	154.3100	PF
JEFFERSON	JEFFERSON RURAL FIRE PROT DIST	PNR11303	154.4150	PF
NORTH BEND	NORTH BEND, CITY OF	PNR11450	153.8450	PL
OREGON CIT	CLACKAMAS, COUNTY OF	PND02044	155.0550	PL
PHILOMATH	PHILOMATH, CITY OF	PNR11495	154.0850	PL
PORTLAND	UNIFIED SEWERAGE AGENCY	PND01297	851.5875	GP
PORTLAND	WASHINGTON, COUNTY OF	PNR11959	854.9875	YP
PORTLAND	WASHINGTON, COUNTY OF	PNR11959	855.2125	YP
PORTLAND	WASHINGTON, COUNTY OF	PNR11959	855.2375	YP
PORTLAND	WASHINGTON, COUNTY OF	PNR11959	855.4625	YP
PORTLAND	WASHINGTON, COUNTY OF	PNR11959	855.4875	YP
PORTLAND	WASHINGTON, COUNTY OF	PNR11959	855.7125	YP
PORTLAND	WASHINGTON, COUNTY OF	PNR11959	855.7375	YP
PORTLAND	WASHINGTON, COUNTY OF	PNR11959	855.9625	YP
PORTLAND	WASHINGTON, COUNTY OF	PNR11959	856.2375	YP
PORTLAND	WASHINGTON, COUNTY OF	PNR11959	857.2375	YP
PORTLAND	WASHINGTON, COUNTY OF	PNR11959	858.2375	YP
PORTLAND	WASHINGTON, COUNTY OF	PNR11959	859.2375	YP
PORTLAND	WASHINGTON, COUNTY OF	PNR11959	859.7375	YP
PORTLAND	WASHINGTON, COUNTY OF	PNR11959	860.2375	YP
PORTLAND	WASHINGTON, COUNTY OF	PNR11959	860.7375	YP
SHERWOOD	WASHINGTON, COUNTY OF	PNR11959	854.9875	YP
SHERWOOD	WASHINGTON, COUNTY OF	PNR11959	855.2125	YP
SHERWOOD	WASHINGTON, COUNTY OF	PNR11959	855.2375	YP
SHERWOOD	WASHINGTON, COUNTY OF	PNR11959	855.4625	YP
SHERWOOD	WASHINGTON, COUNTY OF	PNR11959	855.4875	YP
SHERWOOD	WASHINGTON, COUNTY OF	PNR11959	855.7125	YP
SHERWOOD	WASHINGTON, COUNTY OF	PNR11959	855.7375	YP
SHERWOOD	WASHINGTON, COUNTY OF	PNR11959	855.9625	YP
SHERWOOD	WASHINGTON, COUNTY OF	PNR11959	856.2375	YP
SHERWOOD	WASHINGTON, COUNTY OF	PNR11959	857.2375	YP
SHERWOOD	WASHINGTON, COUNTY OF	PNR11959	858.2375	YP
SHERWOOD	WASHINGTON, COUNTY OF	PNR11959	859.2375	YP
SHERWOOD	WASHINGTON, COUNTY OF	PNR11959	859.7375	YP
SHERWOOD	WASHINGTON, COUNTY OF	PNR11959	860.2375	YP
SHERWOOD	WASHINGTON, COUNTY OF	PNR11959	860.7375	YP
TIGARD	UNIFIED SEWERAGE AGENCY	PND01297	851.5875	GP
TILLAMOOK	OREGON, STATE OF	PNA00004	154.8600	PP
WARM SPRIN	OREGON, STATE OF	PNA00004	155.0100	PP
YAMHILL	WASHINGTON, COUNTY OF	PNR11959	854.9875	YP
YAMHILL	WASHINGTON, COUNTY OF	PNR11959	855.2125	YP
YAMHILL	WASHINGTON, COUNTY OF	PNR11959	855.2375	YP
YAMHILL	WASHINGTON, COUNTY OF	PNR11959	855.4625	YP
YAMHILL	WASHINGTON, COUNTY OF	PNR11959	855.4875	YP
YAMHILL	WASHINGTON, COUNTY OF	PNR11959	855.7125	YP
YAMHILL	WASHINGTON, COUNTY OF	PNR11959	855.7375	YP
YAMHILL	WASHINGTON, COUNTY OF	PNR11959	855.9625	YP
YAMHILL	WASHINGTON, COUNTY OF	PNR11959	856.2375	YP
YAMHILL	WASHINGTON, COUNTY OF	PNR11959	857.2375	YP
YAMHILL	WASHINGTON, COUNTY OF	PNR11959	858.2375	YP
YAMHILL	WASHINGTON, COUNTY OF	PNR11959	859.2375	YP
YAMHILL	WASHINGTON, COUNTY OF	PNR11959	859.7375	YP
YAMHILL	WASHINGTON, COUNTY OF	PNR11959	860.2375	YP
YAMHILL	WASHINGTON, COUNTY OF	PNR11959	860.7375	YP

Pennsylvania

	ELK, COUNTY OF	PND01104	462.9500	PM
	ELK, COUNTY OF	PND01104	462.9750	PM
	ELK, COUNTY OF	PND01104	463.0000	PM
	ELK, COUNTY OF	PND01104	463.0250	PM
	ELK, COUNTY OF	PND01104	463.0500	PM
	ELK, COUNTY OF	PND01104	463.0750	PM
	ELK, COUNTY OF	PND01104	463.1000	PM
	ELK, COUNTY OF	PND01104	463.1250	PM
	ELK, COUNTY OF	PND01104	463.1500	PM
	ELK, COUNTY OF	PND01104	463.1750	PM
	LACKAWANNA, COUNTY OF	PND01249	154.3100	PF
	LACKAWANNA, COUNTY OF	PND01249	465.5750	PF
	LACKAWANNA, COUNTY OF	PND01249	465.6250	PF
	LOWER PAXTON, TOWNSHIP OF	PNR11435	33.9000	PF
	MONROE COUNTY CONTROL	PND01679	465.6250	PF
	PETERS TOWNSHIP VOLUN FIRE D	PNR11930	46.1200	PF
	PETERS TOWNSHIP VOLUN FIRE D	PNR11930	46.2600	PF
	PETERS TOWNSHIP VOLUN FIRE D	PNR11930	46.4000	PF
	PETERS TOWNSHIP VOLUN FIRE D	PNR11930	46.4600	PF
	SOUTH MEDIA FIRE COMPANY 1	PNR11130	46.3400	PF
	UNION, COUNTY OF	PN215121	45.9200	PS
	UNION, COUNTY OF	PN215121	45.9600	PS
ATHENS	ROBERT PACKER HOSP GUTHRIE S	PNR11281	462.9500	PS

ATHENS	ROBERT PACKER HOSPITAL GUTHRIE S	PNR11281	462.9750	PS
ATHENS	ROBERT PACKER HOSL GUTHRIE S	PNR11281	463.0000	PS
ATHENS	ROBERT PACKER HOSP GUTHRIE S	PNR11281	463.0250	PS
ATHENS	ROBERT PACKER HOSP GUTHRIE S	PNR11281	463.0500	PS
ATHENS	ROBERT PACKER HOSP GUTHRIE S	PNR11281	463.0750	PS
ATHENS	ROBERT PACKER HOSP GUTHRIE S	PNR11281	463.1000	PS
ATHENS	ROBERT PACKER HOSP GUTHRIE S	PNR11281	463.1250	PS
ATHENS	ROBERT PACKER HOSP GUTHRIE S	PNR11281	463.1500	PS
ATHENS	ROBERT PACKER HOSP GUTHRIE S	PNR11281	463.1750	PS
BLOOMSBURG	SCOTT, TOWNSHIP OF	PNA00004	155.1000	PL
BOYERTOWN	SCOTT, TOWNSHIP OF	PNA00004	45.2800	PL
CARBONDALE	LACKAWANNA, COUNTY OF	PND01249	154.3100	PF
CARLISLE	CARLISLE, BOROUGH OF	PND01607	856.2375	YP
CARLISLE	CARLISLE, BOROUGH OF	PND01607	858.2375	YP
CARLISLE	CARLISLE, BOROUGH OF	PND01607	859.2375	YP
CARLISLE	CARLISLE, BOROUGH OF	PND01607	860.2375	YP
CARLISLE	CARLISLE, BOROUGH OF	PND01607	860.4875	YP
CLARION	CLARION, BOROUGH OF	PND01272	155.0250	PL
COUDERSPOR	POTTER, COUNTY OF	PND02004	154.2500	PF
COUDERSPOR	POTTER, COUNTY OF	PND02004	154.3850	PF
DANVILLE	MONTOUR, COUNTY OF	PND01594	155.0850	PL
EQUINUNK	MANCHESTER, TOWNSHIP OF	PND01069	154.0850	PL
FREDERICKS	BETHEL, TOWNSHIP OF	PND01266	37.3400	PP
HAINES TOW	UNION, COUNTY OF	PN215121	45.9200	PS
HARRISBURG	HARRISBURG HOSPITAL	PNR11185	152.0075	PS
HARRISBURG	LOWER PAXTON, TOWNSHIP OF	PND01518	33.5000	PF
HARRISBURG	LOWER PAXTON, TOWNSHIP OF	PND01518	33.9000	PF
HARRISBURG	LOWER PAXTON, TOWNSHIP OF	PNR11435	33.9000	PF
HERNDON	NORTHUMBERLAND, COUNTY OF	PND01172	154.6500	PP
LEWIS TOWN	UNION, COUNTY OF	PN215121	45.9200	PS
LIMESTONE	UNION, COUNTY OF	PN215121	45.9200	PS
MC MURRAY	PETERS TOWNSHIP VOLUNT FIRE D	PNR11930	46.1200	PF
MC MURRAY	PETERS TOWNSHIP VOLUNT FIRE D	PNR11930	46.4000	PF
MC MURRAY	PETERS TOWNSHIP VOLUN FIRE D	PNR11930	46.4600	PF
MILLERSTOW	GREENWOOD, TWNSP OF PERRY CO	PNR11845	45.2400	PL
MILLERSVIL	PENNSYLVANIA, COMMONWEALTH OF	PNR11752	153.9350	PP

❑ **YES! I Want To Receive America's #1 Monthly Scanner Magazine AND Save up to 40% Off the Cover Price!**

❑ **One Year for only $20.00** $1.66 ea (Other Countries $34.00 US funds)

❑ **Two Years for only $35.00** $1.45 ea (Other Countries $64.00 US funds)

❑ **Three Years for only $49.00** $1.36 ea (Other Countries $92.00 US funds)

❶ Save up to an additional $4.08 when enclosing payment with order and getting one Free issue for each year ordered!

1-800-890-6999

Call Now With Your Credit Card Or Send Check or Money Order To:

U.S. Scanner Publications
PO Box 14923
Portland, OR 97214-4923

❑ Payment Enclosed❶ ❑ Credit Card❶ ❑ Bill Me

Name _____

Address _____

City, State, Zip _____

MC/Visa/Discover # _____ Expires _____

SAINT MARY	ELK, COUNTY OF	PND01104	463.1000	PM
SAINT MARY	ELK, COUNTY OF	PND01104	463.1250	PM
SAINT MARY	ELK, COUNTY OF	PND01104	463.1500	PM
SAINT MARY	ELK, COUNTY OF	PND01104	463.1750	PM
SAYRE	ROBERT PACKER HOSP GUTHRIE S	PNR11281	462.9500	PS
SAYRE	ROBERT PACKER HOSP GUTHRIE S	PNR11281	462.9750	PS
SAYRE	ROBERT PACKER HOSP GUTHRIE S	PNR11281	463.0000	PS
SAYRE	ROBERT PACKER HOSP GUTHRIE S	PNR11281	463.0250	PS
SAYRE	ROBERT PACKER HOSP GUTHRIE S	PNR11281	463.0500	PS
SAYRE	ROBERT PACKER HOSP GUTHRIE S	PNR11281	463.0750	PS
SAYRE	ROBERT PACKER HOSP GUTHRIE S	PNR11281	463.1000	PS
SAYRE	ROBERT PACKER HOSP GUTHRIE S	PNR11281	463.1250	PS
SAYRE	ROBERT PACKER HOSP GUTHRIE S	PNR11281	463.1500	PS
SAYRE	ROBERT PACKER HOSP GUTHRIE S	PNR11281	463.1750	PS
SCRANTON	LACKAWANNA, COUNTY OF	PND01249	154.3100	PF
SHAMOKIN	NORTHUMBERLAND, COUNTY OF	PND01172	154.6500	PP
WEST CHEST	EAST GOSHEN, TOWNSHIP OF	PND01613	154.0400	PL

South Carolina

	CHARLESTON, COUNTY OF	PNR11346	856.2375	YP
	CHARLESTON, COUNTY OF	PNR11346	856.4625	YP
	CHARLESTON, COUNTY OF	PNR11346	856.4875	YP
	CHARLESTON, COUNTY OF	PNR11346	856.7375	YP
	CHARLESTON, COUNTY OF	PNR11346	856.7625	YP
	CHARLESTON, COUNTY OF	PNR11346	856.9375	YP
	CHARLESTON, COUNTY OF	PNR11346	857.2375	YP
	CHARLESTON, COUNTY OF	PNR11346	857.4625	YP
	CHARLESTON, COUNTY OF	PNR11346	857.4875	YP
	CHARLESTON, COUNTY OF	PNR11346	857.7375	YP
	CHARLESTON, COUNTY OF	PNR11346	857.7625	YP
	CHARLESTON, COUNTY OF	PNR11346	857.9375	YP
	CHARLESTON, COUNTY OF	PNR11346	858.2375	YP
	CHARLESTON, COUNTY OF	PNR11346	858.4625	YP
	CHARLESTON, COUNTY OF	PNR11346	858.4875	YP
	CHARLESTON, COUNTY OF	PNR11346	858.7375	YP
	CHARLESTON, COUNTY OF	PNR11346	858.7625	YP
	CHARLESTON, COUNTY OF	PNR11346	858.9375	YP
	CHARLESTON, COUNTY OF	PNR11346	859.2375	YP
	CHARLESTON, COUNTY OF	PNR11346	859.4625	YP
	CHARLESTON, COUNTY OF	PNR11346	859.4875	YP
	CHARLESTON, COUNTY OF	PNR11346	859.7375	YP
	CHARLESTON, COUNTY OF	PNR11346	859.9375	YP
	CHARLESTON, COUNTY OF	PNR11346	860.2375	YP
	CHARLESTON, COUNTY OF	PNR11346	860.4625	YP
	CHARLESTON, COUNTY OF	PNR11346	860.4875	YP
	CHARLESTON, COUNTY OF	PNR11346	860.7375	YP
	CHARLESTON, COUNTY OF	PNR11346	860.9375	YP
	FOLLY BEACH, CITY OF	PNR11302	155.0700	PP
	FOLLY BEACH, CITY OF	PNR11567	155.1000	PL
BAMBERG	SOUTH CAROLINA, STATE OF	PND01186	866.0375	YF
BAMBERG	SOUTH CAROLINA, STATE OF	PND01186	866.1250	YF
BAMBERG	SOUTH CAROLINA, STATE OF	PND01186	866.1500	YF
BAMBERG	SOUTH CAROLINA, STATE OF	PND01186	866.4375	YF
	INA, STATE OF	PND01186	866.4625	YF
	INA, STATE OF	PND01186	866.5375	YF
	NA, STATE OF	PND01186	866.6250	YF
	INA, STATE OF	PND01186	866.6500	YF
	INA, STATE OF	PND01186	866.8500	YF
	INA, STATE OF	PND01186	867.0375	YF
	INA, STATE OF	PND01186	867.1250	YF
	INA, STATE OF	PND01186	867.1500	YF
	INA, STATE OF	PND01186	867.4375	YF
	INA, STATE OF	PND01186	867.4625	YF
	INA, STATE OF	PND01186	867.5375	YF
	INA, STATE OF	PND01186	867.6500	YF
	INA, STATE OF	PND01186	867.9625	YF
	INA, STATE OF	PND01186	867.9875	YF
	INA, STATE OF	PND01186	868.0375	YF
	INA, STATE OF	PND01186	868.1500	YF
	INA, STATE OF	PND01186	868.2375	YF
	INA, STATE OF	PND01186	868.4250	YF
	INA, STATE OF	PND01186	868.5375	YF
	INA, STATE OF	PND01186	868.8500	YF
	INA, STATE OF	PND01186	868.9250	YF
	INA, STATE OF	PND01186	868.9375	YF
	INA, STATE OF	PND01607	866.0375	YF
	INA, STATE OF	PND01607	866.1250	YF
	INA, STATE OF	PND01607	866.1500	YF
	INA, STATE OF	PND01607	866.4375	YF
	INA, STATE OF	PND01607	866.4625	YF
	INA, STATE OF	PND01607	866.5375	YF
	INA, STATE OF	PND01607	866.6250	YF
	INA, STATE OF	PND01607	866.6500	YF
	INA, STATE OF	PND01607	866.8500	YF
	INA, STATE OF	PND01607	867.0375	YF
	INA, STATE OF	PND01607	867.1250	YF
	INA, STATE OF	PND01607	867.1500	YF
	INA, STATE OF	PND01607	867.4375	YF
	INA, STATE OF	PND01607	867.4625	YF
	INA, STATE OF	PND01607	867.5375	YF
	INA, STATE OF	PND01607	867.6500	YF
	INA, STATE OF	PND01607	867.9625	YF
	INA, STATE OF	PND01607	867.9875	YF
	INA, STATE OF	PND01607	868.0375	YF
	INA, STATE OF	PND01607	868.1500	YF
	INA, STATE OF	PND01607	868.2375	YF
	INA, STATE OF	PND01607	868.4250	YF
BAMBERG	SOUTH CAROLINA, STATE OF	PND01607	868.5375	YF
BAMBERG	SOUTH CAROLINA, STATE OF	PND01607	868.8500	YF
BAMBERG	SOUTH CAROLINA, STATE OF	PND01607	868.9250	YF
BAMBERG	SOUTH CAROLINA, STATE OF	PND01607	868.9375	YF
BONNEAU	SOUTH CAROLINA, STATE OF	PND01598	31.7800	PO
BONNEAU	SOUTH CAROLINA, STATE OF	PND01598	151.1750	PO
BONNEAU	SOUTH CAROLINA, STATE OF	PND01598	151.1900	PO
BONNEAU	SOUTH CAROLINA, STATE OF	PND01598	151.2350	PO
BONNEAU	SOUTH CAROLINA, STATE OF	PND01598	151.2650	PO
BONNEAU	SOUTH CAROLINA, STATE OF	PND01598	151.3850	PO
COLUMBIA	SOUTH CAROLINA, STATE OF	PND01186	866.0375	YF
COLUMBIA	SOUTH CAROLINA, STATE OF	PND01186	866.1250	YF
COLUMBIA	SOUTH CAROLINA, STATE OF	PND01186	866.1500	YF
COLUMBIA	SOUTH CAROLINA, STATE OF	PND01186	866.4375	YF
COLUMBIA	SOUTH CAROLINA, STATE OF	PND01186	866.4625	YF
COLUMBIA	SOUTH CAROLINA, STATE OF	PND01186	866.5375	YF

ANTRIM	ANTRIM COMMUNITY FIRE DEPT	PND01698	33.9400	PF
ASHLAND	SMITHFIELD, VILLAGE OF	PND01655	151.1000	PH
CAMBRIDGE	GUERNSEY, COUNTY OF	PND01263	39.2600	PP
CAMBRIDGE	GUERNSEY, COUNTY OF	PND01263	39.3600	PP
CAMBRIDGE	GUERNSEY, COUNTY OF	PND01263	39.5800	PP
CAMBRIDGE	GUERNSEY, COUNTY OF	PND01263	154.6500	PP
CAMBRIDGE	GUERNSEY, COUNTY OF	PND01263	154.8300	PP
CAMBRIDGE	OHIO, STATE OF	PND01118	44.9400	PP
CAMBRIDGE	OHIO, STATE OF	PND01118	45.0200	PP
CAMBRIDGE	OHIO, STATE OF	PND01118	45.1000	PP
CAMBRIDGE	OHIO, STATE OF	PND01118	154.6800	PP
CAMBRIDGE	OHIO, STATE OF	PND01118	154.9350	PP
CHILLICOTH	SCIOTO, TOWNSHIP OF	PNR11405	154.2500	PF
DAYTON	DAYTON, CITY OF	PNR11875	856.2125	YP
DAYTON	DAYTON, CITY OF	PNR11875	856.4625	YP
DAYTON	DAYTON, CITY OF	PNR11875	856.7125	YP
DAYTON	DAYTON, CITY OF	PNR11875	856.9625	YP
DAYTON	DAYTON, CITY OF	PNR11875	857.2125	YP
DAYTON	DAYTON, CITY OF	PNR11875	857.4625	YP
DAYTON	DAYTON, CITY OF	PNR11875	857.7125	YP
DAYTON	DAYTON, CITY OF	PNR11875	857.9625	YP
DAYTON	DAYTON, CITY OF	PNR11875	858.2125	YP
DAYTON	DAYTON, CITY OF	PNR11875	858.4625	YP
DAYTON	DAYTON, CITY OF	PNR11875	858.7125	YP
DAYTON	DAYTON, CITY OF	PNR11875	858.9625	YP
DAYTON	DAYTON, CITY OF	PNR11875	859.2125	YP
DAYTON	DAYTON, CITY OF	PNR11875	859.4625	YP
DAYTON	DAYTON, CITY OF	PNR11875	859.7125	YP
DAYTON	DAYTON, CITY OF	PNR11875	859.9625	YP
DAYTON	DAYTON, CITY OF	PNR11875	860.2125	YP
DAYTON	DAYTON, CITY OF	PNR11875	860.4625	YP
DAYTON	DAYTON, CITY OF	PNR11875	860.7125	YP
DAYTON	DAYTON, CITY OF	PNR11875	860.9625	YP
DAYTON	RIVERSIDE, CITY OF	PNR11552	46.4200	PF
DAYTON	RIVERSIDE, CITY OF	PNR11552	154.2800	PF
INDEPENDEN	INDEPENDENCE, CITY OF	PN[illegible]		
INDEPENDEN	INDEPENDENCE, CITY OF	PN		
JEFFERSON	JEFFERSON, CITY OF	P[illegible]		
JEFFERSON	JEFFERSON, CITY OF	PN		
JEFFERSON	JEFFERSON, CITY OF	PN		
LEWISVILLE	OHIO, STATE OF	PN		
LONDON	MADISON, COUNTY OF	PN		
LONDON	MADISON, COUNTY OF	PN		
MC ARTHUR	MC ARTHUR, VILLAGE OF	PN		
MONROE	MONROE, MUNICIPALITY OF	PN		
NEWCOMERST	NEWCOMERSTOWN, VILLAGE OF	PN		
OAK HILL	MADISON JEFFERSON JOINT FIRE DISPN			
OTTAWA	OHIO, STATE OF	PN		
OTTAWA	OHIO, STATE OF	PN		
OTTAWA	OHIO, STATE OF	PN		
PAULDING	OHIO, STATE OF	PN		
PAULDING	OHIO, STATE OF	PN		
PAULDING	OHIO, STATE OF	PN		
RICHFIELD	SUMMIT, COUNTY OF	PN		
ROCHESTER	ROCHESTER, TOWNSHIP OF	PN		
ROCHESTER	ROCHESTER, TOWNSHIP OF	PN		
SHAKER HEI	SHAKER HEIGHTS, CITY OF	PN		
SHAKER HEI	SHAKER HEIGHTS, CITY OF	PN		
SHAKER HEI	SHAKER HEIGHTS, CITY OF	PN		
UPPER SAND	OHIO, STATE OF	PN		
UPPER SAND	OHIO, STATE OF	PN		
UPPER SAND	OHIO, STATE OF	PN		
WAVERLY	PIKE, COUNTY OF	PN		
WAVERLY	PIKE, COUNTY OF	PN		
WAVERLY	PIKE, COUNTY OF	PN		
WAVERLY	PIKE, COUNTY OF	PN		
WEST SALEM	WEST SALEM, VILLAGE OF	PN		
WHITE COTT	NEWTON, TOWNSHIP OF	PN		
ZANESVILLE	MUSKINGUM, COUNTY OF	PN		
ZANESVILLE	MUSKINGUM, COUNTY OF	PN		

Oklahoma

	SPAVINAW, CITY OF	PN		
GUTHRIE	SOONER VOLUNTEER FIRE DEPT	PN		
GUTHRIE	SOONER VOLUNTEER FIRE DEPT	PN		
MEDFORD	GRANT, COUNTY OF	PN		
OKLAHOMA C	OKLAHOMA, COUNTY OF	PN		
PONCA CITY	RANCH DRIVE VOL FIRE DEPT	PN		
PONCA CITY	RANCH DRIVE VOL FIRE DEPT	PN		
WALTERS	OKLAHOMA, COUNTY OF	PND02040	151.0550	PP

Oregon

	DESCHUTES VALLEY WATER DIST	PND01298	857.9875	GP
	NORTH BEND, CITY OF	PNR11450	153.8450	PL
	PHILOMATH, CITY OF	PNR11495	154.0850	PL
	UNIFIED SEWERAGE AGENCY	PND01297	851.5875	GP
BRIGHTWOOD	CLACKAMAS, COUNTY OF	PND01515	153.8900	PF
BRIGHTWOOD	CLACKAMAS, COUNTY OF	PND01515	154.1900	PF
BRIGHTWOOD	CLACKAMAS, COUNTY OF	PND01515	154.2200	PF
BRIGHTWOOD	CLACKAMAS, COUNTY OF	PND01515	154.2800	PF
BRIGHTWOOD	CLACKAMAS, COUNTY OF	PND01515	154.3250	PF
COOS BAY	MILLINGTON RURAL FIRE PROT	PND01518	154.3100	PF
COOS BAY	MILLINGTON RURAL FIRE PROT	PND01518	154.4300	PF
GRANTS PAS	GRANTS PASS, CITY OF	PND02041	155.0100	PP
GROVE	WASHINGTON, COUNTY OF	PNR11959	854.9875	YP
GROVE	WASHINGTON, COUNTY OF	PNR11959	855.2125	YP
GROVE	WASHINGTON, COUNTY OF	PNR11959	855.2375	YP
GROVE	WASHINGTON, COUNTY OF	PNR11959	855.4625	YP
GROVE	WASHINGTON, COUNTY OF	PNR11959	855.4875	YP
GROVE	WASHINGTON, COUNTY OF	PNR11959	855.7125	YP
GROVE	WASHINGTON, COUNTY OF	PNR11959	855.7375	YP
GROVE	WASHINGTON, COUNTY OF	PNR11959	855.9625	YP
GROVE	WASHINGTON, COUNTY OF	PNR11959	856.2375	YP
GROVE	WASHINGTON, COUNTY OF	PNR11959	857.2375	YP
GROVE	WASHINGTON, COUNTY OF	PNR11959	858.2375	YP
GROVE	WASHINGTON, COUNTY OF	PNR11959	859.2375	YP
GROVE	WASHINGTON, COUNTY OF	PNR11959	859.7375	YP
GROVE	WASHINGTON, COUNTY OF	PNR11959	860.2375	YP
GROVE	WASHINGTON, COUNTY OF	PNR11959	860.7375	YP
HILLSBORO	UNIFIED SEWERAGE AGENCY	PND01297	851.5875	GP
JEFFERSON	JEFFERSON RURAL FIRE PROT DIST	PNR11303	153.7700	PF
JEFFERSON	JEFFERSON RURAL FIRE PROT DIST	PNR11303	154.1600	PF
JEFFERSON	JEFFERSON RURAL FIRE PROT DIST	PNR11303	154.2800	PF
JEFFERSON	JEFFERSON RURAL FIRE PROT DIST	PNR11303	154.3100	PF
JEFFERSON	JEFFERSON RURAL FIRE PROT DIST	PNR11303	154.4150	PF
NORTH BEND	NORTH BEND, CITY OF	PNR11450	153.8450	PL
OREGON CIT	CLACKAMAS, COUNTY OF	PND02044	155.0550	PL
PHILOMATH	PHILOMATH, CITY OF	PNR11495	154.0850	PL
PORTLAND	UNIFIED SEWERAGE AGENCY	PND01297	851.5875	GP
PORTLAND	WASHINGTON, COUNTY OF	PNR11959	854.9875	YP
PORTLAND	WASHINGTON, COUNTY OF	PNR11959	855.2125	YP
PORTLAND	WASHINGTON, COUNTY OF	PNR11959	855.2375	YP
PORTLAND	WASHINGTON, COUNTY OF	PNR11959	855.4625	YP
PORTLAND	WASHINGTON, COUNTY OF	PNR11959	855.4875	YP
PORTLAND	WASHINGTON, COUNTY OF	PNR11959	855.7125	YP
PORTLAND	WASHINGTON, COUNTY OF	PNR11959	855.7375	YP
PORTLAND	WASHINGTON, COUNTY OF	PNR11959	855.9625	YP
PORTLAND	WASHINGTON, COUNTY OF	PNR11959	856.2375	YP
PORTLAND	WASHINGTON, COUNTY OF	PNR11959	857.2375	YP
PORTLAND	WASHINGTON, COUNTY OF	PNR11959	858.2375	YP
PORTLAND	WASHINGTON, COUNTY OF	PNR11959	859.2375	YP

NO POSTAGE NECESSARY IF MAILED IN THE UNITED STATES

BUSINESS REPLY MAIL

FIRST-CLASS MAIL PERMIT NO. 1298 PORTLAND OR

POSTAGE WILL BE PAID BY ADDRESSEE

U.S. SCANNER PUBLICATIONS
PO BOX 14923
PORTLAND OR 97214-9812

	ELK, COUNTY OF	PND01104	463.1000	PM
	ELK, COUNTY OF	PND01104	463.1250	PM
	ELK, COUNTY OF	PND01104	463.1500	PM
	ELK, COUNTY OF	PND01104	463.1750	PM
	LACKAWANNA, COUNTY OF	PND01249	154.3100	PF
	LACKAWANNA, COUNTY OF	PND01249	465.5750	PF
	LACKAWANNA, COUNTY OF	PND01249	465.6250	PF
	LOWER PAXTON, TOWNSHIP OF	PNR11435	33.9000	PF
	MONROE COUNTY CONTROL	PND01679	465.6250	PF
	PETERS TOWNSHIP VOLUN FIRE D	PNR11930	46.1200	PF
	PETERS TOWNSHIP VOLUN FIRE D	PNR11930	46.2600	PF
	PETERS TOWNSHIP VOLUN FIRE D	PNR11930	46.4000	PF
	PETERS TOWNSHIP VOLUN FIRE D	PNR11930	46.4600	PF
	SOUTH MEDIA FIRE COMPANY 1	PNR11130	46.3400	PF
	UNION, COUNTY OF	PN215121	45.9200	PS
	UNION, COUNTY OF	PN215121	45.9600	PS
ATHENS	ROBERT PACKER HOSP GUTHRIE S	PNR11281	462.9500	PS

ATHENS	ROBERT PACKER HOSPITAL GUTHRIE S	PNR11281	462.9750	PS
ATHENS	ROBERT PACKER HOSL GUTHRIE S	PNR11281	463.0000	PS
ATHENS	ROBERT PACKER HOSP GUTHRIE S	PNR11281	463.0250	PS
ATHENS	ROBERT PACKER HOSP GUTHRIE S	PNR11281	463.0500	PS
ATHENS	ROBERT PACKER HOSP GUTHRIE S	PNR11281	463.0750	PS
ATHENS	ROBERT PACKER HOSP GUTHRIE S	PNR11281	463.1000	PS
ATHENS	ROBERT PACKER HOSP GUTHRIE S	PNR11281	463.1250	PS
ATHENS	ROBERT PACKER HOSP GUTHRIE S	PNR11281	463.1500	PS
ATHENS	ROBERT PACKER HOSP GUTHRIE S	PNR11281	463.1750	PS
BLOOMSBURG	SCOTT, TOWNSHIP OF	PNA00004	155.1000	PL
BOYERTOWN	SCOTT, TOWNSHIP OF	PNA00004	45.2800	PL
CARBONDALE	LACKAWANNA, COUNTY OF	PND01249	154.3100	PF
CARLISLE	CARLISLE, BOROUGH OF	PND01607	856.2375	YP
CARLISLE	CARLISLE, BOROUGH OF	PND01607	858.2375	YP
CARLISLE	CARLISLE, BOROUGH OF	PND01607	859.2375	YP
CARLISLE	CARLISLE, BOROUGH OF	PND01607	860.2375	YP
CARLISLE	CARLISLE, BOROUGH OF	PND01607	860.4875	YP
CLARION	CLARION, BOROUGH OF	PND01272	155.0250	PL
COUDERSPOR	POTTER, COUNTY OF	PND02004	154.2500	PF
COUDERSPOR	POTTER, COUNTY OF	PND02004	154.3850	PF
DANVILLE	MONTOUR, COUNTY OF	PND01594	155.0850	PL
EQUINUNK	MANCHESTER, TOWNSHIP OF	PND01069	154.0850	PL
FREDERICKS	BETHEL, TOWNSHIP OF	PND01266	37.3400	PP
HAINES TOW	UNION, COUNTY OF	PN215121	45.9200	PS
HARRISBURG	HARRISBURG HOSPITAL	PNR11185	152.0075	PS
HARRISBURG	LOWER PAXTON, TOWNSHIP OF	PND01518	33.5000	PF
HARRISBURG	LOWER PAXTON, TOWNSHIP OF	PND01518	33.9000	PF
HARRISBURG	LOWER PAXTON, TOWNSHIP OF	PNR11435	33.9000	PF
HERNDON	NORTHUMBERLAND, COUNTY OF	PND01172	154.6500	PP
LEWIS TOWN	UNION, COUNTY OF	PN215121	45.9200	PS
LIMESTONE	UNION, COUNTY OF	PN215121	45.9200	PS
MC MURRAY	PETERS TOWNSHIP VOLUNT FIRE D	PNR11930	46.1200	PF
MC MURRAY	PETERS TOWNSHIP VOLUNT FIRE D	PNR11930	46.4000	PF
MC MURRAY	PETERS TOWNSHIP VOLUN FIRE D	PNR11930	46.4600	PF
MILLERSTOW	GREENWOOD, TWNSP OF PERRY CO	PNR11845	45.2400	PL
MILLERSVIL	PENNSYLVANIA, COMMONWEALTH OF	PNR11752	153.9350	PP
MONT ALTO	PENNSYLVANIA, COMMONWEALTH OF	PNR99486	45.6200	PP
MONTANDON	NORTHUMBERLAND, COUNTY OF	PND01172	154.6500	PP
MONTOURSVI	MONTOURSVILLE, BOROUGH OF	PND00317	155.0250	PL
MOSCOW	LACKAWANNA, COUNTY OF	PND01249	154.3100	PF
MOUNT COBB	LACKAWANNA, COUNTY OF	PND01249	154.3100	PF
MOUNT LEBA	MOUNT LEBANON, MUNICIPALITY OF	PND01250	471.6875	PL
MOUNT LEBA	MOUNT LEBANON, MUNICIPALITY OF	PND01250	474.6875	PL
PENFIELD	ELK, COUNTY OF	PND01104	462.9500	PM
PENFIELD	ELK, COUNTY OF	PND01104	462.9750	PM
PENFIELD	ELK, COUNTY OF	PND01104	463.0000	PM
PENFIELD	ELK, COUNTY OF	PND01104	463.0250	PM
PENFIELD	ELK, COUNTY OF	PND01104	463.0500	PM
PENFIELD	ELK, COUNTY OF	PND01104	463.0750	PM
PENFIELD	ELK, COUNTY OF	PND01104	463.1000	PM
PENFIELD	ELK, COUNTY OF	PND01104	463.1250	PM
PENFIELD	ELK, COUNTY OF	PND01104	463.1500	PM
PENFIELD	ELK, COUNTY OF	PND01104	463.1750	PM
PITTSBURGH	ALLEGHENY COUNTY, PORT AUTHORITY	PNR11614	470.6125	PL
PITTSBURGH	ALLEGHENY COUNTY, PORT AUTHORITY	PNR11614	470.6625	PL
PITTSBURGH	ALLEGHENY COUNTY, PORT AUTHORITY	PNR11614	470.6875	PL
PITTSBURGH	ALLEGHENY COUNTY, PORT AUTHORITY	PNR11614	470.7375	PL
PITTSBURGH	UPPER SAINT CLAIR TOWNSHIP VFD	PND01698	33.6600	PF
PITTSBURGH	UPPER SAINT CLAIR TOWNSHIP VFD	PND01698	33.7600	PF
PITTSBURGH	UPPER SAINT CLAIR TOWNSHIP VFD	PND01698	33.8600	PF
PITTSBURGH	UPPER SAINT CLAIR TOWNSHIP VFD	PND01698	154.2050	PF
PITTSBURGH	UPPER SAINT CLAIR TOWNSHIP VFD	PND01698	465.6000	PF
PITTSBURGH	UPPER SAINT CLAIR TOWNSHIP VFD	PND01698	465.6250	PF
RIDGWAY	ELK, COUNTY OF	PND01104	462.9500	PM
RIDGWAY	ELK, COUNTY OF	PND01104	462.9750	PM
RIDGWAY	ELK, COUNTY OF	PND01104	463.0000	PM
RIDGWAY	ELK, COUNTY OF	PND01104	463.0250	PM
RIDGWAY	ELK, COUNTY OF	PND01104	463.0500	PM
RIDGWAY	ELK, COUNTY OF	PND01104	463.0750	PM
RIDGWAY	ELK, COUNTY OF	PND01104	463.1000	PM
RIDGWAY	ELK, COUNTY OF	PND01104	463.1250	PM
RIDGWAY	ELK, COUNTY OF	PND01104	463.1500	PM
RIDGWAY	ELK, COUNTY OF	PND01104	463.1750	PM
SAINT MARY	ELK, COUNTY OF	PND01104	462.9500	PM
SAINT MARY	ELK, COUNTY OF	PND01104	462.9750	PM
SAINT MARY	ELK, COUNTY OF	PND01104	463.0000	PM
SAINT MARY	ELK, COUNTY OF	PND01104	463.0250	PM
SAINT MARY	ELK, COUNTY OF	PND01104	463.0500	PM
SAINT MARY	ELK, COUNTY OF	PND01104	463.0750	PM
SAINT MARY	ELK, COUNTY OF	PND01104	463.1000	PM
SAINT MARY	ELK, COUNTY OF	PND01104	463.1250	PM
SAINT MARY	ELK, COUNTY OF	PND01104	463.1500	PM
SAINT MARY	ELK, COUNTY OF	PND01104	463.1750	PM
SAYRE	ROBERT PACKER HOSP GUTHRIE S	PNR11281	462.9500	PS
SAYRE	ROBERT PACKER HOSP GUTHRIE S	PNR11281	462.9750	PS
SAYRE	ROBERT PACKER HOSP GUTHRIE S	PNR11281	463.0000	PS
SAYRE	ROBERT PACKER HOSP GUTHRIE S	PNR11281	463.0250	PS
SAYRE	ROBERT PACKER HOSP GUTHRIE S	PNR11281	463.0500	PS
SAYRE	ROBERT PACKER HOSP GUTHRIE S	PNR11281	463.0750	PS
SAYRE	ROBERT PACKER HOSP GUTHRIE S	PNR11281	463.1000	PS
SAYRE	ROBERT PACKER HOSP GUTHRIE S	PNR11281	463.1250	PS
SAYRE	ROBERT PACKER HOSP GUTHRIE S	PNR11281	463.1500	PS
SAYRE	ROBERT PACKER HOSP GUTHRIE S	PNR11281	463.1750	PS
SCRANTON	LACKAWANNA, COUNTY OF	PND01249	154.3100	PF
SHAMOKIN	NORTHUMBERLAND, COUNTY OF	PND01172	154.6500	PP
WEST CHEST	EAST GOSHEN, TOWNSHIP OF	PND01613	154.0400	PL

South Carolina

	CHARLESTON, COUNTY OF	PNR11346	856.2375	YP
	CHARLESTON, COUNTY OF	PNR11346	856.4625	YP
	CHARLESTON, COUNTY OF	PNR11346	856.4875	YP
	CHARLESTON, COUNTY OF	PNR11346	856.7375	YP
	CHARLESTON, COUNTY OF	PNR11346	856.7625	YP
	CHARLESTON, COUNTY OF	PNR11346	856.9375	YP
	CHARLESTON, COUNTY OF	PNR11346	857.2375	YP
	CHARLESTON, COUNTY OF	PNR11346	857.4625	YP
	CHARLESTON, COUNTY OF	PNR11346	857.4875	YP
	CHARLESTON, COUNTY OF	PNR11346	857.7375	YP
	CHARLESTON, COUNTY OF	PNR11346	857.7625	YP
	CHARLESTON, COUNTY OF	PNR11346	857.9375	YP
	CHARLESTON, COUNTY OF	PNR11346	858.2375	YP
	CHARLESTON, COUNTY OF	PNR11346	858.4625	YP
	CHARLESTON, COUNTY OF	PNR11346	858.4875	YP
	CHARLESTON, COUNTY OF	PNR11346	858.7375	YP
	CHARLESTON, COUNTY OF	PNR11346	858.7625	YP
	CHARLESTON, COUNTY OF	PNR11346	858.9375	YP
	CHARLESTON, COUNTY OF	PNR11346	859.2375	YP
	CHARLESTON, COUNTY OF	PNR11346	859.4625	YP
	CHARLESTON, COUNTY OF	PNR11346	859.4875	YP
	CHARLESTON, COUNTY OF	PNR11346	859.7375	YP
	CHARLESTON, COUNTY OF	PNR11346	859.9375	YP
	CHARLESTON, COUNTY OF	PNR11346	860.2375	YP
	CHARLESTON, COUNTY OF	PNR11346	860.4625	YP
	CHARLESTON, COUNTY OF	PNR11346	860.4875	YP
	CHARLESTON, COUNTY OF	PNR11346	860.7375	YP
	CHARLESTON, COUNTY OF	PNR11346	860.9375	YP
	FOLLY BEACH, CITY OF	PNR11302	155.0700	PP
	FOLLY BEACH, CITY OF	PNR11567	155.1000	PL
BAMBERG	SOUTH CAROLINA, STATE OF	PND01186	866.0375	YF
BAMBERG	SOUTH CAROLINA, STATE OF	PND01186	866.1250	YF
BAMBERG	SOUTH CAROLINA, STATE OF	PND01186	866.1500	YF
BAMBERG	SOUTH CAROLINA, STATE OF	PND01186	866.4375	YF
BAMBERG	SOUTH CAROLINA, STATE OF	PND01186	866.4625	YF
BAMBERG	SOUTH CAROLINA, STATE OF	PND01186	866.5375	YF
BAMBERG	SOUTH CAROLINA, STATE OF	PND01186	866.6250	YF
BAMBERG	SOUTH CAROLINA, STATE OF	PND01186	866.6500	YF
BAMBERG	SOUTH CAROLINA, STATE OF	PND01186	866.8500	YF
BAMBERG	SOUTH CAROLINA, STATE OF	PND01186	867.0375	YF
BAMBERG	SOUTH CAROLINA, STATE OF	PND01186	867.1250	YF
BAMBERG	SOUTH CAROLINA, STATE OF	PND01186	867.1500	YF
BAMBERG	SOUTH CAROLINA, STATE OF	PND01186	867.4375	YF
BAMBERG	SOUTH CAROLINA, STATE OF	PND01186	867.4625	YF
BAMBERG	SOUTH CAROLINA, STATE OF	PND01186	867.5375	YF
BAMBERG	SOUTH CAROLINA, STATE OF	PND01186	867.6500	YF
BAMBERG	SOUTH CAROLINA, STATE OF	PND01186	867.9625	YF
BAMBERG	SOUTH CAROLINA, STATE OF	PND01186	867.9875	YF
BAMBERG	SOUTH CAROLINA, STATE OF	PND01186	868.0375	YF
BAMBERG	SOUTH CAROLINA, STATE OF	PND01186	868.1500	YF
BAMBERG	SOUTH CAROLINA, STATE OF	PND01186	868.2375	YF
BAMBERG	SOUTH CAROLINA, STATE OF	PND01186	868.4250	YF
BAMBERG	SOUTH CAROLINA, STATE OF	PND01186	868.5375	YF
BAMBERG	SOUTH CAROLINA, STATE OF	PND01186	868.8500	YF
BAMBERG	SOUTH CAROLINA, STATE OF	PND01186	868.9250	YF
BAMBERG	SOUTH CAROLINA, STATE OF	PND01186	868.9375	YF
BAMBERG	SOUTH CAROLINA, STATE OF	PND01607	866.0375	YF
BAMBERG	SOUTH CAROLINA, STATE OF	PND01607	866.1250	YF
BAMBERG	SOUTH CAROLINA, STATE OF	PND01607	866.1500	YF
BAMBERG	SOUTH CAROLINA, STATE OF	PND01607	866.4375	YF
BAMBERG	SOUTH CAROLINA, STATE OF	PND01607	866.4625	YF
BAMBERG	SOUTH CAROLINA, STATE OF	PND01607	866.5375	YF
BAMBERG	SOUTH CAROLINA, STATE OF	PND01607	866.6250	YF
BAMBERG	SOUTH CAROLINA, STATE OF	PND01607	866.6500	YF
BAMBERG	SOUTH CAROLINA, STATE OF	PND01607	866.8500	YF
BAMBERG	SOUTH CAROLINA, STATE OF	PND01607	867.0375	YF
BAMBERG	SOUTH CAROLINA, STATE OF	PND01607	867.1250	YF
BAMBERG	SOUTH CAROLINA, STATE OF	PND01607	867.1500	YF
BAMBERG	SOUTH CAROLINA, STATE OF	PND01607	867.4375	YF
BAMBERG	SOUTH CAROLINA, STATE OF	PND01607	867.4625	YF
BAMBERG	SOUTH CAROLINA, STATE OF	PND01607	867.5375	YF
BAMBERG	SOUTH CAROLINA, STATE OF	PND01607	867.6500	YF
BAMBERG	SOUTH CAROLINA, STATE OF	PND01607	867.9625	YF
BAMBERG	SOUTH CAROLINA, STATE OF	PND01607	867.9875	YF
BAMBERG	SOUTH CAROLINA, STATE OF	PND01607	868.0375	YF
BAMBERG	SOUTH CAROLINA, STATE OF	PND01607	868.1500	YF
BAMBERG	SOUTH CAROLINA, STATE OF	PND01607	868.2375	YF
BAMBERG	SOUTH CAROLINA, STATE OF	PND01607	868.4250	YF
BAMBERG	SOUTH CAROLINA, STATE OF	PND01607	868.5375	YF
BAMBERG	SOUTH CAROLINA, STATE OF	PND01607	868.8500	YF
BAMBERG	SOUTH CAROLINA, STATE OF	PND01607	868.9250	YF
BAMBERG	SOUTH CAROLINA, STATE OF	PND01607	868.9375	YF
BONNEAU	SOUTH CAROLINA, STATE OF	PND01598	31.7800	PO
BONNEAU	SOUTH CAROLINA, STATE OF	PND01598	151.1750	PO
BONNEAU	SOUTH CAROLINA, STATE OF	PND01598	151.1900	PO
BONNEAU	SOUTH CAROLINA, STATE OF	PND01598	151.2350	PO
BONNEAU	SOUTH CAROLINA, STATE OF	PND01598	151.2650	PO
BONNEAU	SOUTH CAROLINA, STATE OF	PND01598	151.3850	PO
COLUMBIA	SOUTH CAROLINA, STATE OF	PND01186	866.0375	YF
COLUMBIA	SOUTH CAROLINA, STATE OF	PND01186	866.1250	YF
COLUMBIA	SOUTH CAROLINA, STATE OF	PND01186	866.1500	YF
COLUMBIA	SOUTH CAROLINA, STATE OF	PND01186	866.4375	YF
COLUMBIA	SOUTH CAROLINA, STATE OF	PND01186	866.4625	YF
COLUMBIA	SOUTH CAROLINA, STATE OF	PND01186	866.5375	YF

COLUMBIA	SOUTH CAROLINA, STATE OF	PND01186	866.6250	YF
COLUMBIA	SOUTH CAROLINA, STATE OF	PND01186	866.6500	YF
COLUMBIA	SOUTH CAROLINA, STATE OF	PND01186	866.8500	YF
COLUMBIA	SOUTH CAROLINA, STATE OF	PND01186	867.0375	YF
COLUMBIA	SOUTH CAROLINA, STATE OF	PND01186	867.1250	YF
COLUMBIA	SOUTH CAROLINA, STATE OF	PND01186	867.1500	YF
COLUMBIA	SOUTH CAROLINA, STATE OF	PND01186	867.4375	YF
COLUMBIA	SOUTH CAROLINA, STATE OF	PND01186	867.4625	YF
COLUMBIA	SOUTH CAROLINA, STATE OF	PND01186	867.5375	YF
COLUMBIA	SOUTH CAROLINA, STATE OF	PND01186	867.6500	YF
COLUMBIA	SOUTH CAROLINA, STATE OF	PND01186	867.9625	YF
COLUMBIA	SOUTH CAROLINA, STATE OF	PND01186	867.9875	YF
COLUMBIA	SOUTH CAROLINA, STATE OF	PND01186	868.0375	YF
COLUMBIA	SOUTH CAROLINA, STATE OF	PND01186	868.1500	YF
COLUMBIA	SOUTH CAROLINA, STATE OF	PND01186	868.2375	YF
COLUMBIA	SOUTH CAROLINA, STATE OF	PND01186	868.4250	YF
COLUMBIA	SOUTH CAROLINA, STATE OF	PND01186	868.5375	YF
COLUMBIA	SOUTH CAROLINA, STATE OF	PND01186	868.8500	YF
COLUMBIA	SOUTH CAROLINA, STATE OF	PND01186	868.9250	YF
COLUMBIA	SOUTH CAROLINA, STATE OF	PND01186	868.9375	YF
COLUMBIA	SOUTH CAROLINA, STATE OF	PND01607	866.0375	YF
COLUMBIA	SOUTH CAROLINA, STATE OF	PND01607	866.1250	YF
COLUMBIA	SOUTH CAROLINA, STATE OF	PND01607	866.1500	YF
COLUMBIA	SOUTH CAROLINA, STATE OF	PND01607	866.4375	YF
COLUMBIA	SOUTH CAROLINA, STATE OF	PND01607	866.4625	YF
COLUMBIA	SOUTH CAROLINA, STATE OF	PND01607	866.5375	YF
COLUMBIA	SOUTH CAROLINA, STATE OF	PND01607	866.6250	YF
COLUMBIA	SOUTH CAROLINA, STATE OF	PND01607	866.6500	YF
COLUMBIA	SOUTH CAROLINA, STATE OF	PND01607	866.8500	YF
COLUMBIA	SOUTH CAROLINA, STATE OF	PND01607	867.0375	YF
COLUMBIA	SOUTH CAROLINA, STATE OF	PND01607	867.1250	YF
COLUMBIA	SOUTH CAROLINA, STATE OF	PND01607	867.1500	YF
COLUMBIA	SOUTH CAROLINA, STATE OF	PND01607	867.4375	YF
COLUMBIA	SOUTH CAROLINA, STATE OF	PND01607	867.4625	YF
COLUMBIA	SOUTH CAROLINA, STATE OF	PND01607	867.5375	YF
COLUMBIA	SOUTH CAROLINA, STATE OF	PND01607	867.6500	YF
COLUMBIA	SOUTH CAROLINA, STATE OF	PND01607	867.9625	YF
COLUMBIA	SOUTH CAROLINA, STATE OF	PND01607	867.9875	YF
COLUMBIA	SOUTH CAROLINA, STATE OF	PND01607	868.0375	YF
COLUMBIA	SOUTH CAROLINA, STATE OF	PND01607	868.1500	YF
COLUMBIA	SOUTH CAROLINA, STATE OF	PND01607	868.2375	YF
COLUMBIA	SOUTH CAROLINA, STATE OF	PND01607	868.4250	YF
COLUMBIA	SOUTH CAROLINA, STATE OF	PND01607	868.5375	YF
COLUMBIA	SOUTH CAROLINA, STATE OF	PND01607	868.8500	YF
COLUMBIA	SOUTH CAROLINA, STATE OF	PND01607	868.9250	YF
COLUMBIA	SOUTH CAROLINA, STATE OF	PND01607	868.9375	YF
ELGIN	SOUTH CAROLINA, STATE OF	PND01186	866.0375	YF
ELGIN	SOUTH CAROLINA, STATE OF	PND01186	866.1250	YF
ELGIN	SOUTH CAROLINA, STATE OF	PND01186	866.1500	YF
ELGIN	SOUTH CAROLINA, STATE OF	PND01186	866.4375	YF
ELGIN	SOUTH CAROLINA, STATE OF	PND01186	866.4625	YF
ELGIN	SOUTH CAROLINA, STATE OF	PND01186	866.5375	YF
ELGIN	SOUTH CAROLINA, STATE OF	PND01186	866.6250	YF
ELGIN	SOUTH CAROLINA, STATE OF	PND01186	866.6500	YF
ELGIN	SOUTH CAROLINA, STATE OF	PND01186	866.8500	YF
ELGIN	SOUTH CAROLINA, STATE OF	PND01186	867.0375	YF
ELGIN	SOUTH CAROLINA, STATE OF	PND01186	867.1250	YF
ELGIN	SOUTH CAROLINA, STATE OF	PND01186	867.1500	YF
ELGIN	SOUTH CAROLINA, STATE OF	PND01186	867.4375	YF
ELGIN	SOUTH CAROLINA, STATE OF	PND01186	867.4625	YF
ELGIN	SOUTH CAROLINA, STATE OF	PND01186	867.5375	YF
ELGIN	SOUTH CAROLINA, STATE OF	PND01186	867.6500	YF
ELGIN	SOUTH CAROLINA, STATE OF	PND01186	867.9625	YF
ELGIN	SOUTH CAROLINA, STATE OF	PND01186	867.9875	YF
ELGIN	SOUTH CAROLINA, STATE OF	PND01186	868.0375	YF
ELGIN	SOUTH CAROLINA, STATE OF	PND01186	868.1500	YF
ELGIN	SOUTH CAROLINA, STATE OF	PND01186	868.2375	YF
ELGIN	SOUTH CAROLINA, STATE OF	PND01186	868.4250	YF
ELGIN	SOUTH CAROLINA, STATE OF	PND01186	868.5375	YF
ELGIN	SOUTH CAROLINA, STATE OF	PND01186	868.8500	YF
ELGIN	SOUTH CAROLINA, STATE OF	PND01186	868.9250	YF
ELGIN	SOUTH CAROLINA, STATE OF	PND01186	868.9375	YF
ELGIN	SOUTH CAROLINA, STATE OF	PND01607	866.0375	YF
ELGIN	SOUTH CAROLINA, STATE OF	PND01607	866.1250	YF
ELGIN	SOUTH CAROLINA, STATE OF	PND01607	866.1500	YF
ELGIN	SOUTH CAROLINA, STATE OF	PND01607	866.4375	YF
ELGIN	SOUTH CAROLINA, STATE OF	PND01607	866.4625	YF
ELGIN	SOUTH CAROLINA, STATE OF	PND01607	866.5375	YF
ELGIN	SOUTH CAROLINA, STATE OF	PND01607	866.6250	YF
ELGIN	SOUTH CAROLINA, STATE OF	PND01607	866.6500	YF
ELGIN	SOUTH CAROLINA, STATE OF	PND01607	866.8500	YF
ELGIN	SOUTH CAROLINA, STATE OF	PND01607	867.0375	YF
ELGIN	SOUTH CAROLINA, STATE OF	PND01607	867.1250	YF
ELGIN	SOUTH CAROLINA, STATE OF	PND01607	867.1500	YF
ELGIN	SOUTH CAROLINA, STATE OF	PND01607	867.4375	YF
ELGIN	SOUTH CAROLINA, STATE OF	PND01607	867.4625	YF
ELGIN	SOUTH CAROLINA, STATE OF	PND01607	867.5375	YF
ELGIN	SOUTH CAROLINA, STATE OF	PND01607	867.6500	YF
ELGIN	SOUTH CAROLINA, STATE OF	PND01607	867.9625	YF
ELGIN	SOUTH CAROLINA, STATE OF	PND01607	867.9875	YF
ELGIN	SOUTH CAROLINA, STATE OF	PND01607	868.0375	YF
ELGIN	SOUTH CAROLINA, STATE OF	PND01607	868.1500	YF
ELGIN	SOUTH CAROLINA, STATE OF	PND01607	868.2375	YF
ELGIN	SOUTH CAROLINA, STATE OF	PND01607	868.4250	YF
ELGIN	SOUTH CAROLINA, STATE OF	PND01607	868.5375	YF
ELGIN	SOUTH CAROLINA, STATE OF	PND01607	868.8500	YF
ELGIN	SOUTH CAROLINA, STATE OF	PND01607	868.9250	YF
ELGIN	SOUTH CAROLINA, STATE OF	PND01607	868.9375	YF
ELGIN	SOUTH CAROLINA, STATE OF	PND01607	867.9875	YF
ELGIN	SOUTH CAROLINA, STATE OF	PND01607	868.0375	YF
ELGIN	SOUTH CAROLINA, STATE OF	PND01607	868.1500	YF
ELGIN	SOUTH CAROLINA, STATE OF	PND01607	868.2375	YF
ELGIN	SOUTH CAROLINA, STATE OF	PND01607	868.4250	YF
ELGIN	SOUTH CAROLINA, STATE OF	PND01607	868.5375	YF
ELGIN	SOUTH CAROLINA, STATE OF	PND01607	868.8500	YF
ELGIN	SOUTH CAROLINA, STATE OF	PND01607	868.9250	YF
ELGIN	SOUTH CAROLINA, STATE OF	PND01607	868.9375	YF
ELGIN	SOUTH CAROLINA, STATE OF	PND01607	867.9875	YF
ELGIN	SOUTH CAROLINA, STATE OF	PND01607	868.0375	YF
ELGIN	SOUTH CAROLINA, STATE OF	PND01607	868.1500	YF
ELGIN	SOUTH CAROLINA, STATE OF	PND01607	868.2375	YF
ELGIN	SOUTH CAROLINA, STATE OF	PND01607	868.4250	YF
ELGIN	SOUTH CAROLINA, STATE OF	PND01607	868.5375	YF
ELGIN	SOUTH CAROLINA, STATE OF	PND01607	868.8500	YF
ELGIN	SOUTH CAROLINA, STATE OF	PND01607	868.9250	YF
ELGIN	SOUTH CAROLINA, STATE OF	PND01607	868.9375	YF
ELGIN	SOUTH CAROLINA, STATE OF	PND01607	867.9875	YF
ELGIN	SOUTH CAROLINA, STATE OF	PND01607	868.0375	YF
ELGIN	SOUTH CAROLINA, STATE OF	PND01607	868.1500	YF
ELGIN	SOUTH CAROLINA, STATE OF	PND01607	868.2375	YF
ELGIN	SOUTH CAROLINA, STATE OF	PND01607	868.4250	YF
ELGIN	SOUTH CAROLINA, STATE OF	PND01607	868.5375	YF
ELGIN	SOUTH CAROLINA, STATE OF	PND01607	868.8500	YF
ELGIN	SOUTH CAROLINA, STATE OF	PND01607	868.9250	YF
ELGIN	SOUTH CAROLINA, STATE OF	PND01607	868.9375	YF
FOLLY BEAC	FOLLY BEACH, CITY OF	PNR11567	155.1000	PL
GEORGETOWN	SOUTH CAROLINA, STATE OF	PND01186	866.0375	YF
GEORGETOWN	SOUTH CAROLINA, STATE OF	PND01186	866.1250	YF
GEORGETOWN	SOUTH CAROLINA, STATE OF	PND01186	866.1500	YF
GEORGETOWN	SOUTH CAROLINA, STATE OF	PND01186	866.4375	YF
GEORGETOWN	SOUTH CAROLINA, STATE OF	PND01186	866.4625	YF
GEORGETOWN	SOUTH CAROLINA, STATE OF	PND01186	866.5375	YF
GEORGETOWN	SOUTH CAROLINA, STATE OF	PND01186	866.6250	YF
GEORGETOWN	SOUTH CAROLINA, STATE OF	PND01186	866.6500	YF
GEORGETOWN	SOUTH CAROLINA, STATE OF	PND01186	866.8500	YF
GEORGETOWN	SOUTH CAROLINA, STATE OF	PND01186	867.0375	YF
GEORGETOWN	SOUTH CAROLINA, STATE OF	PND01186	867.1250	YF
GEORGETOWN	SOUTH CAROLINA, STATE OF	PND01186	867.1500	YF
GEORGETOWN	SOUTH CAROLINA, STATE OF	PND01186	867.4375	YF
GEORGETOWN	SOUTH CAROLINA, STATE OF	PND01186	867.4625	YF
GEORGETOWN	SOUTH CAROLINA, STATE OF	PND01186	867.5375	YF
GEORGETOWN	SOUTH CAROLINA, STATE OF	PND01186	867.6500	YF
GEORGETOWN	SOUTH CAROLINA, STATE OF	PND01186	867.9625	YF
GEORGETOWN	SOUTH CAROLINA, STATE OF	PND01186	867.9875	YF
GEORGETOWN	SOUTH CAROLINA, STATE OF	PND01186	868.0375	YF
GEORGETOWN	SOUTH CAROLINA, STATE OF	PND01186	868.1500	YF
GEORGETOWN	SOUTH CAROLINA, STATE OF	PND01186	868.2375	YF
GEORGETOWN	SOUTH CAROLINA, STATE OF	PND01186	868.4250	YF
GEORGETOWN	SOUTH CAROLINA, STATE OF	PND01186	868.5375	YF
GEORGETOWN	SOUTH CAROLINA, STATE OF	PND01186	868.8500	YF
GEORGETOWN	SOUTH CAROLINA, STATE OF	PND01186	868.9250	YF
GEORGETOWN	SOUTH CAROLINA, STATE OF	PND01186	868.9375	YF
GEORGETOWN	SOUTH CAROLINA, STATE OF	PND01607	866.0375	YF
GEORGETOWN	SOUTH CAROLINA, STATE OF	PND01607	866.1250	YF
GEORGETOWN	SOUTH CAROLINA, STATE OF	PND01607	866.1500	YF
GEORGETOWN	SOUTH CAROLINA, STATE OF	PND01607	866.4375	YF
GEORGETOWN	SOUTH CAROLINA, STATE OF	PND01607	866.4625	YF
GEORGETOWN	SOUTH CAROLINA, STATE OF	PND01607	866.5375	YF
GEORGETOWN	SOUTH CAROLINA, STATE OF	PND01607	866.6250	YF
GEORGETOWN	SOUTH CAROLINA, STATE OF	PND01607	866.6500	YF
GEORGETOWN	SOUTH CAROLINA, STATE OF	PND01607	866.8500	YF
GEORGETOWN	SOUTH CAROLINA, STATE OF	PND01607	867.0375	YF
GEORGETOWN	SOUTH CAROLINA, STATE OF	PND01607	867.1250	YF
GEORGETOWN	SOUTH CAROLINA, STATE OF	PND01607	867.1500	YF
GEORGETOWN	SOUTH CAROLINA, STATE OF	PND01607	867.4375	YF
GEORGETOWN	SOUTH CAROLINA, STATE OF	PND01607	867.4625	YF
GEORGETOWN	SOUTH CAROLINA, STATE OF	PND01607	867.5375	YF
GEORGETOWN	SOUTH CAROLINA, STATE OF	PND01607	867.6500	YF
GEORGETOWN	SOUTH CAROLINA, STATE OF	PND01607	867.9625	YF
GEORGETOWN	SOUTH CAROLINA, STATE OF	PND01607	867.9875	YF
GEORGETOWN	SOUTH CAROLINA, STATE OF	PND01607	868.0375	YF
GEORGETOWN	SOUTH CAROLINA, STATE OF	PND01607	868.1500	YF
GEORGETOWN	SOUTH CAROLINA, STATE OF	PND01607	868.2375	YF
GEORGETOWN	SOUTH CAROLINA, STATE OF	PND01607	868.4250	YF
GEORGETOWN	SOUTH CAROLINA, STATE OF	PND01607	868.5375	YF
GEORGETOWN	SOUTH CAROLINA, STATE OF	PND01607	868.8500	YF
GEORGETOWN	SOUTH CAROLINA, STATE OF	PND01607	868.9250	YF
GEORGETOWN	SOUTH CAROLINA, STATE OF	PND01607	868.9375	YF
HOLLYWOOD	CHARLESTON, COUNTY OF	PNR11346	856.2375	YP
HOLLYWOOD	CHARLESTON, COUNTY OF	PNR11346	856.4625	YP
HOLLYWOOD	CHARLESTON, COUNTY OF	PNR11346	856.4875	YP
HOLLYWOOD	CHARLESTON, COUNTY OF	PNR11346	856.7375	YP
HOLLYWOOD	CHARLESTON, COUNTY OF	PNR11346	856.7625	YP
HOLLYWOOD	CHARLESTON, COUNTY OF	PNR11346	856.9375	YP
HOLLYWOOD	CHARLESTON, COUNTY OF	PNR11346	857.2375	YP
HOLLYWOOD	CHARLESTON, COUNTY OF	PNR11346	857.4625	YP
HOLLYWOOD	CHARLESTON, COUNTY OF	PNR11346	857.4875	YP
HOLLYWOOD	CHARLESTON, COUNTY OF	PNR11346	857.7375	YP
HOLLYWOOD	CHARLESTON, COUNTY OF	PNR11346	857.7625	YP
HOLLYWOOD	CHARLESTON, COUNTY OF	PNR11346	857.9375	YP
HOLLYWOOD	CHARLESTON, COUNTY OF	PNR11346	858.2375	YP
HOLLYWOOD	CHARLESTON, COUNTY OF	PNR11346	858.4625	YP
HOLLYWOOD	CHARLESTON, COUNTY OF	PNR11346	858.4875	YP
HOLLYWOOD	CHARLESTON, COUNTY OF	PNR11346	858.7375	YP
HOLLYWOOD	CHARLESTON, COUNTY OF	PNR11346	858.7625	YP
HOLLYWOOD	CHARLESTON, COUNTY OF	PNR11346	858.9375	YP
HOLLYWOOD	CHARLESTON, COUNTY OF	PNR11346	859.2375	YP
HOLLYWOOD	CHARLESTON, COUNTY OF	PNR11346	859.4625	YP
HOLLYWOOD	CHARLESTON, COUNTY OF	PNR11346	859.4875	YP
HOLLYWOOD	CHARLESTON, COUNTY OF	PNR11346	859.7375	YP
HOLLYWOOD	CHARLESTON, COUNTY OF	PNR11346	859.9375	YP
HOLLYWOOD	CHARLESTON, COUNTY OF	PNR11346	860.2375	YP
HOLLYWOOD	CHARLESTON, COUNTY OF	PNR11346	860.4625	YP
HOLLYWOOD	CHARLESTON, COUNTY OF	PNR11346	860.4875	YP
HOLLYWOOD	CHARLESTON, COUNTY OF	PNR11346	860.7375	YP
HOLLYWOOD	CHARLESTON, COUNTY OF	PNR11346	860.9375	YP
JOHNS ISLA	CHARLESTON, COUNTY OF	PNR11346	856.2375	YP
JOHNS ISLA	CHARLESTON, COUNTY OF	PNR11346	856.4625	YP
JOHNS ISLA	CHARLESTON, COUNTY OF	PNR11346	856.4875	YP
JOHNS ISLA	CHARLESTON, COUNTY OF	PNR11346	856.7375	YP
JOHNS ISLA	CHARLESTON, COUNTY OF	PNR11346	856.7625	YP
JOHNS ISLA	CHARLESTON, COUNTY OF	PNR11346	856.9375	YP
JOHNS ISLA	CHARLESTON, COUNTY OF	PNR11346	857.2375	YP
JOHNS ISLA	CHARLESTON, COUNTY OF	PNR11346	857.4625	YP
JOHNS ISLA	CHARLESTON, COUNTY OF	PNR11346	857.4875	YP
JOHNS ISLA	CHARLESTON, COUNTY OF	PNR11346	857.7375	YP
JOHNS ISLA	CHARLESTON, COUNTY OF	PNR11346	857.7625	YP
JOHNS ISLA	CHARLESTON, COUNTY OF	PNR11346	857.9375	YP
JOHNS ISLA	CHARLESTON, COUNTY OF	PNR11346	858.2375	YP

JOHNS ISLA	CHARLESTON, COUNTY OF	PNR11346	858.4625	YP
JOHNS ISLA	CHARLESTON, COUNTY OF	PNR11346	858.4875	YP
JOHNS ISLA	CHARLESTON, COUNTY OF	PNR11346	858.7375	YP
JOHNS ISLA	CHARLESTON, COUNTY OF	PNR11346	858.7625	YP
JOHNS ISLA	CHARLESTON, COUNTY OF	PNR11346	858.9375	YP
JOHNS ISLA	CHARLESTON, COUNTY OF	PNR11346	859.2375	YP
JOHNS ISLA	CHARLESTON, COUNTY OF	PNR11346	859.4625	YP
JOHNS ISLA	CHARLESTON, COUNTY OF	PNR11346	859.4875	YP
JOHNS ISLA	CHARLESTON, COUNTY OF	PNR11346	859.7375	YP
JOHNS ISLA	CHARLESTON, COUNTY OF	PNR11346	859.9375	YP
JOHNS ISLA	CHARLESTON, COUNTY OF	PNR11346	860.2375	YP
JOHNS ISLA	CHARLESTON, COUNTY OF	PNR11346	860.4625	YP
JOHNS ISLA	CHARLESTON, COUNTY OF	PNR11346	860.4875	YP
JOHNS ISLA	CHARLESTON, COUNTY OF	PNR11346	860.7375	YP
JOHNS ISLA	CHARLESTON, COUNTY OF	PNR11346	860.9375	YP
LEXINGTON	LEXINGTON, COUNTY OF	PND01910	829.2625	YP
LEXINGTON	LEXINGTON, COUNTY OF	PND01910	855.2375	YP
LEXINGTON	LEXINGTON, COUNTY OF	PND01910	855.4625	YP
LEXINGTON	LEXINGTON, COUNTY OF	PND01910	855.7125	YP
LEXINGTON	LEXINGTON, COUNTY OF	PND01910	856.2625	YP
LEXINGTON	LEXINGTON, COUNTY OF	PND01910	857.2625	YP
LEXINGTON	LEXINGTON, COUNTY OF	PND01910	858.2625	YP
LEXINGTON	LEXINGTON, COUNTY OF	PND01910	859.2625	YP
LEXINGTON	LEXINGTON, COUNTY OF	PND01910	859.7125	YP
LEXINGTON	LEXINGTON, COUNTY OF	PND01910	859.9625	YP
LEXINGTON	LEXINGTON, COUNTY OF	PND01910	860.2625	YP
LEXINGTON	LEXINGTON, COUNTY OF	PND01910	860.7125	YP
LEXINGTON	LEXINGTON, COUNTY OF	PND01910	860.9625	YP
LYNCHBURG	LEXINGTON, COUNTY OF	PND01910	854.9875	YP
LYNCHBURG	LEXINGTON, COUNTY OF	PND01910	855.9625	YP
LYNCHBURG	LEXINGTON, COUNTY OF	PND01910	855.9875	YP
LYNCHBURG	LEXINGTON, COUNTY OF	PND01910	856.4625	YP
LYNCHBURG	LEXINGTON, COUNTY OF	PND01910	856.9625	YP
LYNCHBURG	LEXINGTON, COUNTY OF	PND01910	856.9875	YP
LYNCHBURG	LEXINGTON, COUNTY OF	PND01910	857.4625	YP
LYNCHBURG	LEXINGTON, COUNTY OF	PND01910	857.7625	YP
LYNCHBURG	LEXINGTON, COUNTY OF	PND01910	857.9625	YP
LYNCHBURG	LEXINGTON, COUNTY OF	PND01910	857.9875	YP
LYNCHBURG	LEXINGTON, COUNTY OF	PND01910	858.4625	YP
LYNCHBURG	LEXINGTON, COUNTY OF	PND01910	858.7625	YP
LYNCHBURG	LEXINGTON, COUNTY OF	PND01910	858.9625	YP
LYNCHBURG	LEXINGTON, COUNTY OF	PND01910	858.9875	YP
LYNCHBURG	LEXINGTON, COUNTY OF	PND01910	859.4625	YP
LYNCHBURG	LEXINGTON, COUNTY OF	PND01910	859.7625	YP
LYNCHBURG	LEXINGTON, COUNTY OF	PND01910	859.9875	YP
LYNCHBURG	LEXINGTON, COUNTY OF	PND01910	860.4625	YP
LYNCHBURG	LEXINGTON, COUNTY OF	PND01910	860.7625	YP
LYNCHBURG	LEXINGTON, COUNTY OF	PND01910	860.9875	YP
MC CLELLAN	CHARLESTON, COUNTY OF	PNR11346	856.2375	YP
MC CLELLAN	CHARLESTON, COUNTY OF	PNR11346	856.4625	YP
MC CLELLAN	CHARLESTON, COUNTY OF	PNR11346	856.4875	YP
MC CLELLAN	CHARLESTON, COUNTY OF	PNR11346	856.7375	YP
MC CLELLAN	CHARLESTON, COUNTY OF	PNR11346	856.7625	YP
MC CLELLAN	CHARLESTON, COUNTY OF	PNR11346	856.9375	YP
MC CLELLAN	CHARLESTON, COUNTY OF	PNR11346	857.2375	YP
MC CLELLAN	CHARLESTON, COUNTY OF	PNR11346	857.4625	YP
MC CLELLAN	CHARLESTON, COUNTY OF	PNR11346	857.4875	YP
MC CLELLAN	CHARLESTON, COUNTY OF	PNR11346	857.7375	YP
MC CLELLAN	CHARLESTON, COUNTY OF	PNR11346	857.7625	YP
MC CLELLAN	CHARLESTON, COUNTY OF	PNR11346	857.9375	YP
MC CLELLAN	CHARLESTON, COUNTY OF	PNR11346	858.2375	YP
MC CLELLAN	CHARLESTON, COUNTY OF	PNR11346	858.4625	YP
MC CLELLAN	CHARLESTON, COUNTY OF	PNR11346	858.4875	YP
MC CLELLAN	CHARLESTON, COUNTY OF	PNR11346	858.7375	YP
MC CLELLAN	CHARLESTON, COUNTY OF	PNR11346	858.7625	YP
MC CLELLAN	CHARLESTON, COUNTY OF	PNR11346	858.9375	YP
MC CLELLAN	CHARLESTON, COUNTY OF	PNR11346	859.2375	YP
MC CLELLAN	CHARLESTON, COUNTY OF	PNR11346	859.4625	YP
MC CLELLAN	CHARLESTON, COUNTY OF	PNR11346	859.4875	YP
MC CLELLAN	CHARLESTON, COUNTY OF	PNR11346	859.7375	YP
MC CLELLAN	CHARLESTON, COUNTY OF	PNR11346	859.9375	YP
MC CLELLAN	CHARLESTON, COUNTY OF	PNR11346	860.2375	YP
MC CLELLAN	CHARLESTON, COUNTY OF	PNR11346	860.4625	YP
MC CLELLAN	CHARLESTON, COUNTY OF	PNR11346	860.4875	YP
MC CLELLAN	CHARLESTON, COUNTY OF	PNR11346	860.7375	YP
MC CLELLAN	CHARLESTON, COUNTY OF	PNR11346	860.9375	YP
MOUNT PLEA	CHARLESTON, COUNTY OF	PNR11346	856.2375	YP
MOUNT PLEA	CHARLESTON, COUNTY OF	PNR11346	856.4625	YP
MOUNT PLEA	CHARLESTON, COUNTY OF	PNR11346	856.4875	YP
MOUNT PLEA	CHARLESTON, COUNTY OF	PNR11346	856.7375	YP
MOUNT PLEA	CHARLESTON, COUNTY OF	PNR11346	856.7625	YP
MOUNT PLEA	CHARLESTON, COUNTY OF	PNR11346	856.9375	YP
MOUNT PLEA	CHARLESTON, COUNTY OF	PNR11346	857.2375	YP
MOUNT PLEA	CHARLESTON, COUNTY OF	PNR11346	857.4625	YP
MOUNT PLEA	CHARLESTON, COUNTY OF	PNR11346	857.4875	YP
MOUNT PLEA	CHARLESTON, COUNTY OF	PNR11346	857.7375	YP
MOUNT PLEA	CHARLESTON, COUNTY OF	PNR11346	857.7625	YP
MOUNT PLEA	CHARLESTON, COUNTY OF	PNR11346	857.9375	YP
MOUNT PLEA	CHARLESTON, COUNTY OF	PNR11346	858.2375	YP
MOUNT PLEA	CHARLESTON, COUNTY OF	PNR11346	858.4625	YP
MOUNT PLEA	CHARLESTON, COUNTY OF	PNR11346	858.4875	YP
MOUNT PLEA	CHARLESTON, COUNTY OF	PNR11346	858.7375	YP
MOUNT PLEA	CHARLESTON, COUNTY OF	PNR11346	858.7625	YP
MOUNT PLEA	CHARLESTON, COUNTY OF	PNR11346	858.9375	YP
MOUNT PLEA	CHARLESTON, COUNTY OF	PNR11346	859.2375	YP
MOUNT PLEA	CHARLESTON, COUNTY OF	PNR11346	859.4625	YP
MOUNT PLEA	CHARLESTON, COUNTY OF	PNR11346	859.4875	YP
MOUNT PLEA	CHARLESTON, COUNTY OF	PNR11346	859.7375	YP
MOUNT PLEA	CHARLESTON, COUNTY OF	PNR11346	859.9375	YP
MOUNT PLEA	CHARLESTON, COUNTY OF	PNR11346	860.2375	YP
MOUNT PLEA	CHARLESTON, COUNTY OF	PNR11346	860.4625	YP
MOUNT PLEA	CHARLESTON, COUNTY OF	PNR11346	860.4875	YP
MOUNT PLEA	CHARLESTON, COUNTY OF	PNR11346	860.7375	YP
MOUNT PLEA	CHARLESTON, COUNTY OF	PNR11346	860.9375	YP
NORTH CHAR	CHARLESTON, COUNTY OF	PNR11346	856.2375	YP
NORTH CHAR	CHARLESTON, COUNTY OF	PNR11346	856.4625	YP
NORTH CHAR	CHARLESTON, COUNTY OF	PNR11346	856.4875	YP
NORTH CHAR	CHARLESTON, COUNTY OF	PNR11346	856.7375	YP
NORTH CHAR	CHARLESTON, COUNTY OF	PNR11346	856.7625	YP
NORTH CHAR	CHARLESTON, COUNTY OF	PNR11346	856.9375	YP
NORTH CHAR	CHARLESTON, COUNTY OF	PNR11346	857.2375	YP
NORTH CHAR	CHARLESTON, COUNTY OF	PNR11346	857.4625	YP
NORTH CHAR	CHARLESTON, COUNTY OF	PNR11346	857.4875	YP
NORTH CHAR	CHARLESTON, COUNTY OF	PNR11346	857.7375	YP
NORTH CHAR	CHARLESTON, COUNTY OF	PNR11346	857.7625	YP
NORTH CHAR	CHARLESTON, COUNTY OF	PNR11346	857.9375	YP
NORTH CHAR	CHARLESTON, COUNTY OF	PNR11346	858.2375	YP
NORTH CHAR	CHARLESTON, COUNTY OF	PNR11346	858.4625	YP
NORTH CHAR	CHARLESTON, COUNTY OF	PNR11346	858.4875	YP
NORTH CHAR	CHARLESTON, COUNTY OF	PNR11346	858.7375	YP
NORTH CHAR	CHARLESTON, COUNTY OF	PNR11346	858.7625	YP
NORTH CHAR	CHARLESTON, COUNTY OF	PNR11346	858.9375	YP
NORTH CHAR	CHARLESTON, COUNTY OF	PNR11346	859.2375	YP
NORTH CHAR	CHARLESTON, COUNTY OF	PNR11346	859.4625	YP
NORTH CHAR	CHARLESTON, COUNTY OF	PNR11346	859.4875	YP
NORTH CHAR	CHARLESTON, COUNTY OF	PNR11346	859.7375	YP
NORTH CHAR	CHARLESTON, COUNTY OF	PNR11346	859.9375	YP
NORTH CHAR	CHARLESTON, COUNTY OF	PNR11346	860.2375	YP
NORTH CHAR	CHARLESTON, COUNTY OF	PNR11346	860.4625	YP
NORTH CHAR	CHARLESTON, COUNTY OF	PNR11346	860.4875	YP
NORTH CHAR	CHARLESTON, COUNTY OF	PNR11346	860.7375	YP
NORTH CHAR	CHARLESTON, COUNTY OF	PNR11346	860.9375	YP
ORANGEBURG	SOUTH CAROLINA, STATE OF	PND01186	866.0375	YF
ORANGEBURG	SOUTH CAROLINA, STATE OF	PND01186	866.1250	YF
ORANGEBURG	SOUTH CAROLINA, STATE OF	PND01186	866.1500	YF
ORANGEBURG	SOUTH CAROLINA, STATE OF	PND01186	866.4375	YF
ORANGEBURG	SOUTH CAROLINA, STATE OF	PND01186	866.4625	YF
ORANGEBURG	SOUTH CAROLINA, STATE OF	PND01186	866.5375	YF
ORANGEBURG	SOUTH CAROLINA, STATE OF	PND01186	866.6250	YF
ORANGEBURG	SOUTH CAROLINA, STATE OF	PND01186	866.6500	YF
ORANGEBURG	SOUTH CAROLINA, STATE OF	PND01186	866.8500	YF
ORANGEBURG	SOUTH CAROLINA, STATE OF	PND01186	867.0375	YF
ORANGEBURG	SOUTH CAROLINA, STATE OF	PND01186	867.1250	YF
ORANGEBURG	SOUTH CAROLINA, STATE OF	PND01186	867.1500	YF
ORANGEBURG	SOUTH CAROLINA, STATE OF	PND01186	867.4375	YF
ORANGEBURG	SOUTH CAROLINA, STATE OF	PND01186	867.4625	YF
ORANGEBURG	SOUTH CAROLINA, STATE OF	PND01186	867.5375	YF
ORANGEBURG	SOUTH CAROLINA, STATE OF	PND01186	867.6500	YF
ORANGEBURG	SOUTH CAROLINA, STATE OF	PND01186	867.9625	YF
ORANGEBURG	SOUTH CAROLINA, STATE OF	PND01186	867.9875	YF
ORANGEBURG	SOUTH CAROLINA, STATE OF	PND01186	868.0375	YF
ORANGEBURG	SOUTH CAROLINA, STATE OF	PND01186	868.1500	YF
ORANGEBURG	SOUTH CAROLINA, STATE OF	PND01186	868.2375	YF
ORANGEBURG	SOUTH CAROLINA, STATE OF	PND01186	868.4250	YF
ORANGEBURG	SOUTH CAROLINA, STATE OF	PND01186	868.5375	YF
ORANGEBURG	SOUTH CAROLINA, STATE OF	PND01186	868.8500	YF
ORANGEBURG	SOUTH CAROLINA, STATE OF	PND01186	868.9250	YF
ORANGEBURG	SOUTH CAROLINA, STATE OF	PND01186	868.9375	YF
ORANGEBURG	SOUTH CAROLINA, STATE OF	PND01607	866.0375	YF
ORANGEBURG	SOUTH CAROLINA, STATE OF	PND01607	866.1250	YF
ORANGEBURG	SOUTH CAROLINA, STATE OF	PND01607	866.1500	YF
ORANGEBURG	SOUTH CAROLINA, STATE OF	PND01607	866.4375	YF
ORANGEBURG	SOUTH CAROLINA, STATE OF	PND01607	866.4625	YF
ORANGEBURG	SOUTH CAROLINA, STATE OF	PND01607	866.5375	YF
ORANGEBURG	SOUTH CAROLINA, STATE OF	PND01607	866.6250	YF
ORANGEBURG	SOUTH CAROLINA, STATE OF	PND01607	866.6500	YF
ORANGEBURG	SOUTH CAROLINA, STATE OF	PND01607	866.8500	YF
ORANGEBURG	SOUTH CAROLINA, STATE OF	PND01607	867.0375	YF
ORANGEBURG	SOUTH CAROLINA, STATE OF	PND01607	867.1250	YF
ORANGEBURG	SOUTH CAROLINA, STATE OF	PND01607	867.1500	YF
ORANGEBURG	SOUTH CAROLINA, STATE OF	PND01607	867.4375	YF
ORANGEBURG	SOUTH CAROLINA, STATE OF	PND01607	867.4625	YF
ORANGEBURG	SOUTH CAROLINA, STATE OF	PND01607	867.5375	YF
ORANGEBURG	SOUTH CAROLINA, STATE OF	PND01607	867.6500	YF
ORANGEBURG	SOUTH CAROLINA, STATE OF	PND01607	867.9625	YF
ORANGEBURG	SOUTH CAROLINA, STATE OF	PND01607	867.9875	YF
ORANGEBURG	SOUTH CAROLINA, STATE OF	PND01607	868.0375	YF
ORANGEBURG	SOUTH CAROLINA, STATE OF	PND01607	868.1500	YF
ORANGEBURG	SOUTH CAROLINA, STATE OF	PND01607	868.2375	YF
ORANGEBURG	SOUTH CAROLINA, STATE OF	PND01607	868.4250	YF
ORANGEBURG	SOUTH CAROLINA, STATE OF	PND01607	868.5375	YF
ORANGEBURG	SOUTH CAROLINA, STATE OF	PND01607	868.8500	YF
ORANGEBURG	SOUTH CAROLINA, STATE OF	PND01607	868.9250	YF
ORANGEBURG	SOUTH CAROLINA, STATE OF	PND01607	868.9375	YF
PINEWOOD	LEXINGTON, COUNTY OF	PND01910	854.9875	YP
PINEWOOD	LEXINGTON, COUNTY OF	PND01910	855.9625	YP
PINEWOOD	LEXINGTON, COUNTY OF	PND01910	855.9875	YP
PINEWOOD	LEXINGTON, COUNTY OF	PND01910	856.4625	YP
PINEWOOD	LEXINGTON, COUNTY OF	PND01910	856.9625	YP
PINEWOOD	LEXINGTON, COUNTY OF	PND01910	856.9875	YP
PINEWOOD	LEXINGTON, COUNTY OF	PND01910	857.4625	YP
PINEWOOD	LEXINGTON, COUNTY OF	PND01910	857.7625	YP

PINEWOOD	LEXINGTON, COUNTY OF	PND01910	857.9625	YP
PINEWOOD	LEXINGTON, COUNTY OF	PND01910	857.9875	YP
PINEWOOD	LEXINGTON, COUNTY OF	PND01910	858.4625	YP
PINEWOOD	LEXINGTON, COUNTY OF	PND01910	858.7625	YP
PINEWOOD	LEXINGTON, COUNTY OF	PND01910	858.9625	YP
PINEWOOD	LEXINGTON, COUNTY OF	PND01910	858.9875	YP
PINEWOOD	LEXINGTON, COUNTY OF	PND01910	859.4625	YP
PINEWOOD	LEXINGTON, COUNTY OF	PND01910	859.7625	YP
PINEWOOD	LEXINGTON, COUNTY OF	PND01910	859.9875	YP
PINEWOOD	LEXINGTON, COUNTY OF	PND01910	860.4625	YP
PINEWOOD	LEXINGTON, COUNTY OF	PND01910	860.7625	YP
PINEWOOD	LEXINGTON, COUNTY OF	PND01910	860.9875	YP
SAINT MATT	SOUTH CAROLINA, STATE OF	PND01186	866.0375	YF
SAINT MATT	SOUTH CAROLINA, STATE OF	PND01186	866.1250	YF
SAINT MATT	SOUTH CAROLINA, STATE OF	PND01186	866.1500	YF
SAINT MATT	SOUTH CAROLINA, STATE OF	PND01186	866.4375	YF
SAINT MATT	SOUTH CAROLINA, STATE OF	PND01186	866.4625	YF
SAINT MATT	SOUTH CAROLINA, STATE OF	PND01186	866.5375	YF
SAINT MATT	SOUTH CAROLINA, STATE OF	PND01186	866.6250	YF
SAINT MATT	SOUTH CAROLINA, STATE OF	PND01186	866.6500	YF
SAINT MATT	SOUTH CAROLINA, STATE OF	PND01186	866.8500	YF
SAINT MATT	SOUTH CAROLINA, STATE OF	PND01186	867.0375	YF
SAINT MATT	SOUTH CAROLINA, STATE OF	PND01186	867.1250	YF
SAINT MATT	SOUTH CAROLINA, STATE OF	PND01186	867.1500	YF
SAINT MATT	SOUTH CAROLINA, STATE OF	PND01186	867.4375	YF
SAINT MATT	SOUTH CAROLINA, STATE OF	PND01186	867.4625	YF
SAINT MATT	SOUTH CAROLINA, STATE OF	PND01186	867.5375	YF
SAINT MATT	SOUTH CAROLINA, STATE OF	PND01186	867.6500	YF
SAINT MATT	SOUTH CAROLINA, STATE OF	PND01186	867.9625	YF
SAINT MATT	SOUTH CAROLINA, STATE OF	PND01186	867.9875	YF
SAINT MATT	SOUTH CAROLINA, STATE OF	PND01186	868.0375	YF
SAINT MATT	SOUTH CAROLINA, STATE OF	PND01186	868.1500	YF
SAINT MATT	SOUTH CAROLINA, STATE OF	PND01186	868.2375	YF
SAINT MATT	SOUTH CAROLINA, STATE OF	PND01186	868.4250	YF
SAINT MATT	SOUTH CAROLINA, STATE OF	PND01186	868.5375	YF
SAINT MATT	SOUTH CAROLINA, STATE OF	PND01186	868.8500	YF
SAINT MATT	SOUTH CAROLINA, STATE OF	PND01186	868.9250	YF
SAINT MATT	SOUTH CAROLINA, STATE OF	PND01186	868.9375	YF
SAINT MATT	SOUTH CAROLINA, STATE OF	PND01607	866.0375	YF
SAINT MATT	SOUTH CAROLINA, STATE OF	PND01607	866.1250	YF
SAINT MATT	SOUTH CAROLINA, STATE OF	PND01607	866.1500	YF
SAINT MATT	SOUTH CAROLINA, STATE OF	PND01607	866.4375	YF
SAINT MATT	SOUTH CAROLINA, STATE OF	PND01607	866.4625	YF
SAINT MATT	SOUTH CAROLINA, STATE OF	PND01607	866.5375	YF
SAINT MATT	SOUTH CAROLINA, STATE OF	PND01607	866.6250	YF
SAINT MATT	SOUTH CAROLINA, STATE OF	PND01607	866.6500	YF
SAINT MATT	SOUTH CAROLINA, STATE OF	PND01607	866.8500	YF
SAINT MATT	SOUTH CAROLINA, STATE OF	PND01607	867.0375	YF
SAINT MATT	SOUTH CAROLINA, STATE OF	PND01607	867.1250	YF
SAINT MATT	SOUTH CAROLINA, STATE OF	PND01607	867.1500	YF
SAINT MATT	SOUTH CAROLINA, STATE OF	PND01607	867.4375	YF
SAINT MATT	SOUTH CAROLINA, STATE OF	PND01607	867.4625	YF
SAINT MATT	SOUTH CAROLINA, STATE OF	PND01607	867.5375	YF
SAINT MATT	SOUTH CAROLINA, STATE OF	PND01607	867.6500	YF
SAINT MATT	SOUTH CAROLINA, STATE OF	PND01607	867.9625	YF
SAINT MATT	SOUTH CAROLINA, STATE OF	PND01607	867.9875	YF
SAINT MATT	SOUTH CAROLINA, STATE OF	PND01607	868.0375	YF
SAINT MATT	SOUTH CAROLINA, STATE OF	PND01607	868.1500	YF
SAINT MATT	SOUTH CAROLINA, STATE OF	PND01607	868.2375	YF
SAINT MATT	SOUTH CAROLINA, STATE OF	PND01607	868.4250	YF
SAINT MATT	SOUTH CAROLINA, STATE OF	PND01607	868.5375	YF
SAINT MATT	SOUTH CAROLINA, STATE OF	PND01607	868.8500	YF
SAINT MATT	SOUTH CAROLINA, STATE OF	PND01607	868.9250	YF
SAINT MATT	SOUTH CAROLINA, STATE OF	PND01607	868.9375	YF
SIX MILE	SIX MILE, TOWN OF	PNR11496	154.0700	PF
SUMTER	LEXINGTON, COUNTY OF	PND01910	854.9875	YP
SUMTER	LEXINGTON, COUNTY OF	PND01910	855.9625	YP
SUMTER	LEXINGTON, COUNTY OF	PND01910	855.9875	YP
SUMTER	LEXINGTON, COUNTY OF	PND01910	856.4625	YP
SUMTER	LEXINGTON, COUNTY OF	PND01910	856.9625	YP
SUMTER	LEXINGTON, COUNTY OF	PND01910	856.9875	YP
SUMTER	LEXINGTON, COUNTY OF	PND01910	857.4625	YP
SUMTER	LEXINGTON, COUNTY OF	PND01910	857.7625	YP
SUMTER	LEXINGTON, COUNTY OF	PND01910	857.9625	YP
SUMTER	LEXINGTON, COUNTY OF	PND01910	857.9875	YP
SUMTER	LEXINGTON, COUNTY OF	PND01910	858.4625	YP
SUMTER	LEXINGTON, COUNTY OF	PND01910	858.7625	YP
SUMTER	LEXINGTON, COUNTY OF	PND01910	858.9625	YP
SUMTER	LEXINGTON, COUNTY OF	PND01910	858.9875	YP
SUMTER	LEXINGTON, COUNTY OF	PND01910	859.4625	YP
SUMTER	LEXINGTON, COUNTY OF	PND01910	859.7625	YP
SUMTER	LEXINGTON, COUNTY OF	PND01910	859.9875	YP
SUMTER	LEXINGTON, COUNTY OF	PND01910	860.4625	YP
SUMTER	LEXINGTON, COUNTY OF	PND01910	860.7625	YP
SUMTER	LEXINGTON, COUNTY OF	PND01910	860.9875	YP

South Dakota

	HUGHES, COUNTY OF	PNR11634	851.0000	YP
	HUGHES, COUNTY OF	PNR11768	851.0000	YP
ARLINGTON	ARLINGTON, CITY OF	PNR11311	154.2200	PF
CENTERPOIN	YANKTON, CITY OF	PND00295	155.0850	PL
FORT PIERR	SOUTH DAKOTA, STATE OF	PND01601	154.0250	PL
IONA	SOUTH DAKOTA, STATE OF	PND01601	151.2800	PL
ISABEL	SOUTH DAKOTA, STATE OF	PND01601	154.1150	PL
LONG VALLE	SOUTH DAKOTA, STATE OF	PND01601	154.1150	PL
LOWORY	SOUTH DAKOTA, STATE OF	PND01601	151.1450	PL
PARKSTON	PARKSTON, CITY OF	PND01599	39.0200	PP
PARKSTON	PARKSTON, CITY OF	PND01599	39.1000	PP
PARKSTON	PARKSTON, CITY OF	PND01599	39.1600	PP
PARKSTON	PARKSTON, CITY OF	PND01599	39.1800	PP
PARKSTON	PARKSTON, CITY OF	PND01599	39.3200	PP
PARKSTON	PARKSTON, CITY OF	PND01599	154.7100	PP
PHILIP	SOUTH DAKOTA, STATE OF	PND01601	151.2800	PL
SIOUX FALL	SOUTH DAKOTA, STATE OF	PND01595	465.4750	PP

Tennessee

BARTLETT	BARTLETT, CITY OF	PNR11874	856.7375	YP
BARTLETT	BARTLETT, CITY OF	PNR11874	857.7375	YP
BARTLETT	BARTLETT, CITY OF	PNR11874	858.7375	YP
BARTLETT	BARTLETT, CITY OF	PNR11874	859.7375	YP
BARTLETT	BARTLETT, CITY OF	PNR11874	860.7375	YP
BRIGHTON	TIPTON COUNTY EMERG COMMUNIC	PND02005	153.8750	PF
BRIGHTON	TIPTON COUNTY EMERG COMMUNIC	PND02005	154.1900	PF
BRIGHTON	TIPTON COUNTY EMERG COMMUNIC	PND02005	154.2650	PF
BRIGHTON	TIPTON COUNTY EMERG COMMUNIC	PND02005	154.2950	PF
BRIGHTON	TIPTON COUNTY EMERG COMMUNIC	PND02005	154.3250	PF
COVINGTON	TIPTON COUNTY EMERG COMMUNIC	PND02005	154.1900	PF
COVINGTON	TIPTON COUNTY EMERG COMMUNIC	PND02005	154.2650	PF
COVINGTON	TIPTON COUNTY EMERG COMMUNIC	PND02005	154.2950	PF
DRUMMONDS	TIPTON COUNTY EMERG COMMUNIC	PND02004	153.8750	PF
DRUMMONDS	TIPTON COUNTY EMERG COMMUNIC	PND02004	154.1900	PF
HUMBOLDT	HUMBOLDT, CITY OF	PND01248	151.0550	PF
HUMBOLDT	HUMBOLDT, CITY OF	PND01248	154.1300	PF
JACKSON	JACKSON MADISON COUNTY GEN H	PND01247	35.6400	PM
MC MINNVIL	WARREN, COUNTY OF	PND01253	153.9950	PL
MC MINNVIL	WARREN, COUNTY OF	PND01253	155.1000	PL
OAK RIDGE	OAKRIDGE, CITY OF	PND01690	855.7375	GP
SPARTA	BON DE CROFT FIRE DEPT	PND01698	154.1600	PF

Texas

	HARRIS METHODIST HOSPITAL	PND01265	462.9625	PM
	HARRIS METHODIST HOSPITAL	PND01265	467.9625	PM
	LOCKHART, CITY OF	PNR11778	154.3700	PF
	SHINER, CITY OF	PNR11834	45.6000	PL
ABILENE	GAINESVILLE, CITY OF	PNA00002	155.0100	PP
BEVERLY HI	BEVERLY HILLS, CITY OF	PND01272	154.9500	PP
CARTHAGE	CARTHAGE, CITY OF	PND00037	154.7550	PP
COLUMBUS	GAINESVILLE, CITY OF	PNA00002	37.2600	PL
COLUMBUS	GAINESVILLE, CITY OF	PNA00002	155.0250	PL
CROCKETT	EAST TEXAS MEDICAL CENTER	PND01192	856.9625	YP
CROCKETT	EAST TEXAS MEDICAL CENTER	PND01192	857.9625	YP
CROCKETT	EAST TEXAS MEDICAL CENTER	PND01192	858.9625	YP
CROCKETT	EAST TEXAS MEDICAL CENTER	PND01192	859.9625	YP
CROCKETT	EAST TEXAS MEDICAL CENTER	PND01192	860.9625	YP
DALHART	DALHART, CITY OF	PNR11566	45.1600	PL
EL PASO	GAINESVILLE, CITY OF	PNA00002	858.2250	GP
EL PASO	GAINESVILLE, CITY OF	PNA00002	859.2250	GP
EL PASO	SOCORRO, CITY OF	PND01514	150.7750	PF
EL PASO	SOCORRO, CITY OF	PND01514	150.7900	PF
EL PASO	SOCORRO, CITY OF	PND01514	154.3700	PF
EL PASO	SOCORRO, CITY OF	PND01514	154.4300	PF
LAKE WORTH	LAKE WORTH, CITY OF	PNA00003	465.2500	PP
LIVE OAK	SAN ANTONIO, CITY OF	PND02106	855.9875	GP
LOCKHART	LOCKHART, CITY OF	PNR11778	154.3700	PF
LUBBOCK	TEXAS TECH UNIVERSITY	PND01299	856.9625	YP
LUBBOCK	TEXAS TECH UNIVERSITY	PND01299	857.2125	GP
LUBBOCK	TEXAS TECH UNIVERSITY	PND01299	857.9625	YP
LUBBOCK	TEXAS TECH UNIVERSITY	PND01299	858.9625	YP
LUBBOCK	TEXAS TECH UNIVERSITY	PND01299	859.9625	YP
LUBBOCK	TEXAS TECH UNIVERSITY	PND01299	860.9625	YP
MAUD	MAUD, TOWN OF	PND01525	150.7900	PF
MAUD	MAUD, TOWN OF	PND01525	154.3700	PF
MC KINNEY	COLLIN, COUNTY OF	PND01690	866.2250	GF
MESQUITE	MESQUITE, CITY OF	PNR96309	866.0125	GF
MESQUITE	MESQUITE, CITY OF	PNR96309	868.0125	GF
MISSOURI C	MISSOURI CITY, CITY OF	PND01193	866.0875	YF
MISSOURI C	MISSOURI CITY, CITY OF	PND01193	866.7375	YF
MISSOURI C	MISSOURI CITY, CITY OF	PND01297	857.9625	YP
MISSOURI C	MISSOURI CITY, CITY OF	PND01297	858.9625	YP
MISSOURI C	MISSOURI CITY, CITY OF	PND01297	859.9625	YP
MISSOURI C	MISSOURI CITY, CITY OF	PND01297	860.9625	YP
OVERTON	OVERTON, CITY OF	PND02044	155.0250	PL
RICHARDSON	RICHARDSON, CITY OF	PNR11568	866.0125	YF
RICHARDSON	RICHARDSON, CITY OF	PNR11568	866.5125	YF
RICHARDSON	RICHARDSON, CITY OF	PNR11568	867.0125	YF
RICHARDSON	RICHARDSON, CITY OF	PNR11568	867.2000	YF
RICHARDSON	RICHARDSON, CITY OF	PNR11568	867.2500	YF
RICHARDSON	RICHARDSON, CITY OF	PNR11568	867.2750	YF
RICHARDSON	RICHARDSON, CITY OF	PNR11568	867.3000	YF
RICHARDSON	RICHARDSON, CITY OF	PNR11568	867.3250	YF
RICHARDSON	RICHARDSON, CITY OF	PNR11568	867.3500	YF
RICHARDSON	RICHARDSON, CITY OF	PNR11568	867.3750	YF
RICHARDSON	RICHARDSON, CITY OF	PNR11568	867.5125	YF
RICHARDSON	RICHARDSON, CITY OF	PNR11568	868.0125	YF
RIO GRANDE	RIO GRANDE CITY, CITY OF	PND02071	865.2000	GP
RIO GRANDE	STARR, COUNTY OF	PND01813	154.7100	PP
RIO GRANDE	STARR, COUNTY OF	PND01813	154.9500	PP
SAN ANTONI	SAN ANTONIO, CITY OF	PND02106	855.2125	GP
SAN ANTONI	SAN ANTONIO, CITY OF	PND02106	856.2125	GP

SAN ANTONI	SAN ANTONIO, CITY OF	PND02106	857.2125	GP
SHINER	SHINER, CITY OF	PNR11834	45.6000	PL
VIDOR	AMERICAN NATIONAL RED CROSS	PN009158	47.4200	PS
VIDOR	AMERICAN NATIONAL RED CROSS	PNR11819	47.4200	PS
VIEW	GAINESVILLE, CITY OF	PNA00002	154.3700	PP
VIEW	GAINESVILLE, CITY OF	PNA00002	154.6500	PP
VIEW	GAINESVILLE, CITY OF	PNA00002	154.7250	PP
WEATHERFOR	BEVERLY HILLS, CITY OF	PND01272	154.8750	PP

Utah

BOUNTIFUL	BOUNTIFUL, CITY OF	PND02045	154.9350	PP
LAYTON	LAYTON, CITY OF	PND01607	856.9375	GP
MAGNA	TOOELE, COUNTY OF	PND01052	851.0875	GP
MAGNA	TOOELE, COUNTY OF	PND01052	851.2625	GP
MAGNA	TOOELE, COUNTY OF	PND01052	851.3125	GP
SALT LAKE	SALT LAKE CITY, CITY OF	PN501616	855.2125	GP
SALT LAKE	SALT LAKE CITY, CITY OF	PN501616	855.7125	GP
SALT LAKE	SALT LAKE CITY, CITY OF	PN501616	855.9625	GP
SALT LAKE	UTAH, STATE OF	PNR11899	154.1150	PL
WENDOVER	UTAH, STATE OF	PND02044	42.8800	PP
WENDOVER	UTAH, STATE OF	PND02044	42.9400	PP
WENDOVER	UTAH, STATE OF	PND02044	155.0700	PP

Virginia

	BATH, TOWN OF	PNR11184	851.0000	YP
	CARROLLTON VOLUNTEER FIRE DEPT	PND01603	154.1600	PF
	CARROLLTON VOLUNTEER FIRE DEPT	PND01603	154.2050	PF
	YORK, COUNTY OF	PNR11567	154.0100	PF
	YORK, COUNTY OF	PNR11567	154.1750	PF
	YORK, COUNTY OF	PNR11567	154.2650	PF
	YORK, COUNTY OF	PNR11567	154.2950	PF
	YORK, COUNTY OF	PNR11567	154.3250	PF
	YORK, COUNTY OF	PNR11567	154.4000	PF
ARLINGTON	ARLINGTON, COUNTY OF	PND01277	151.3850	PL
ARLINGTON	ARLINGTON, COUNTY OF	PND01277	155.0550	PL
BLACKSBURG	VIRGINIA, COMMONWEALTH OF	PND01910	856.7375	GP
DUBLIN	VIRGINIA, COMMONWEALTH OF	PND02044	39.1200	PP
DUBLIN	VIRGINIA, COMMONWEALTH OF	PND02044	39.5400	PP
GRAFTON	YORK, COUNTY OF	PNR11567	154.0100	PF
GRAFTON	YORK, COUNTY OF	PNR11567	154.4000	PF
HONAKER	VIRGINIA, COMMONWEALTH OF	PND02044	39.1200	PP
HONAKER	VIRGINIA, COMMONWEALTH OF	PND02044	39.5400	PP
MONETA	VIRGINIA, COMMONWEALTH OF	PND02044	39.1200	PP
MONETA	VIRGINIA, COMMONWEALTH OF	PND02044	39.5400	PP
ORANGE	ORANGE, COUNTY OF	PND01069	153.7400	PL
ORANGE	ORANGE, COUNTY OF	PND01069	154.0550	PL
RIDGEWAY	VIRGINIA, COMMONWEALTH OF	PND02044	39.1200	PP
RIDGEWAY	VIRGINIA, COMMONWEALTH OF	PND02044	39.5400	PP
TABB	YORK, COUNTY OF	PNR11567	154.0100	PF
TABB	YORK, COUNTY OF	PNR11567	154.4000	PF
TROUTVILLE	VIRGINIA, COMMONWEALTH OF	PND02044	39.1200	PP
TROUTVILLE	VIRGINIA, COMMONWEALTH OF	PND02044	39.5400	PP
WOODBRIDGE	VIRGINIA, COMMONWEALTH OF	PNR10676	39.5000	PP
WOODBRIDGE	VIRGINIA, COMMONWEALTH OF	PNR10676	39.5400	PP
YORKTOWN	YORK, COUNTY OF	PNR11567	154.0100	PF
YORKTOWN	YORK, COUNTY OF	PNR11567	154.2650	PF
YORKTOWN	YORK, COUNTY OF	PNR11567	154.4000	PF

Vermont

	IRASBURG FIRE DEPARTMENT	PNR11617	154.1450	PF
	IRASBURG FIRE DEPARTMENT	PNR11617	154.2950	PF
ESSEX JUNC	WESTFORD, TOWN OF	PNR11834	154.2350	PF
IRASBURG	IRASBURG FIRE DEPARTMENT	PNR11617	154.1450	PF
IRASBURG	IRASBURG FIRE DEPARTMENT	PNR11617	154.2950	PF
MARSHFIELD	MARSHFIELD, TOWN OF	PND01997	153.8600	PL
MOUNT HOLL	MOUNT HOLLY, TOWN OF	PNR11780	153.7700	PF
MOUNT HOLL	MOUNT HOLLY, TOWN OF	PNR11780	153.8900	PF
MOUNT HOLL	MOUNT HOLLY, TOWN OF	PNR11780	154.2500	PF
NORTH HYDE	NORTH HYDE PARK, TOWN OF	PNR11486	154.1900	PF
RUTLAND	RUTLAND COUNTY MUTUAL FIRE AID	PND01516	154.2500	PF
SHEFFIELD	SHEFFIELD WHEELOCK VOL FIRE DEPT	PNR11950	154.2200	PF
WEST RUTLA	RUTLAND COUNTY MUTUAL FIRE AID	PND01516	154.2500	PF
WESTFORD	WESTFORD, TOWN OF	PNR11834	154.2350	PF

Washington

	GRANT, COUNTY OF	PND00934	854.8125	YP
	GRANT, COUNTY OF	PND00934	855.8125	YP
	GRANT, COUNTY OF	PND00934	856.2375	YP
	GRANT, COUNTY OF	PND00934	856.2625	YP
	GRANT, COUNTY OF	PND00934	856.4375	YP
	GRANT, COUNTY OF	PND00934	857.2375	YP
	GRANT, COUNTY OF	PND00934	857.2625	YP
	GRANT, COUNTY OF	PND00934	857.4375	YP
	GRANT, COUNTY OF	PND00934	858.2375	YP
	GRANT, COUNTY OF	PND00934	858.2625	YP
	GRANT, COUNTY OF	PND00934	858.4375	YP
	GRANT, COUNTY OF	PND00934	859.2375	YP
	GRANT, COUNTY OF	PND00934	859.2625	YP
	GRANT, COUNTY OF	PND00934	859.4375	YP
	GRANT, COUNTY OF	PND00934	860.2375	YP
	GRANT, COUNTY OF	PND00934	860.2625	YP
	GRANT, COUNTY OF	PND00934	860.4375	YP
	ROSLYN, CITY OF	PNR11565	154.7850	PP
	ROSLYN, CITY OF	PNR11565	155.0100	PP
BELLINGHAM	WASHINGTON, STATE OF	PND02070	851.2625	YP
BELLINGHAM	WASHINGTON, STATE OF	PND02070	851.8125	YP
BELLINGHAM	WASHINGTON, STATE OF	PND02070	851.9625	YP
BELLINGHAM	WASHINGTON, STATE OF	PND02070	852.1125	YP
BELLINGHAM	WASHINGTON, STATE OF	PND02070	852.7125	YP
BEVERLY	GRANT, COUNTY OF	PND00934	856.2625	YP
BEVERLY	GRANT, COUNTY OF	PND00934	856.4375	YP
BEVERLY	GRANT, COUNTY OF	PND00934	857.2625	YP
BEVERLY	GRANT, COUNTY OF	PND00934	857.4375	YP
BEVERLY	GRANT, COUNTY OF	PND00934	858.2625	YP
BEVERLY	GRANT, COUNTY OF	PND00934	858.4375	YP
BEVERLY	GRANT, COUNTY OF	PND00934	859.4375	YP
BEVERLY	GRANT, COUNTY OF	PND00934	860.4375	YP
COULEE CIT	GRANT, COUNTY OF	PND00934	856.2625	YP
COULEE CIT	GRANT, COUNTY OF	PND00934	857.2625	YP
COULEE CIT	GRANT, COUNTY OF	PND00934	858.2625	YP
COULEE CIT	GRANT, COUNTY OF	PND00934	859.2625	YP
COULEE CIT	GRANT, COUNTY OF	PND00934	860.2625	YP
EAST WENAT	PANGBORN MEMORIAL AIRPORT	PN214268	154.2500	PF
EAST WENAT	PANGBORN MEMORIAL AIRPORT	PN214268	154.3100	PF
EAST WENAT	PANGBORN MEMORIAL AIRPORT	PN214268	154.4300	PF
ELECTRIC C	GRANT, COUNTY OF	PND00934	854.8125	YP
ELECTRIC C	GRANT, COUNTY OF	PND00934	855.8125	YP
EPHRATA	GRANT, COUNTY OF	PND00934	856.2375	YP
EPHRATA	GRANT, COUNTY OF	PND00934	857.2375	YP
EPHRATA	GRANT, COUNTY OF	PND00934	858.2375	YP
EPHRATA	GRANT, COUNTY OF	PND00934	859.2375	YP
EPHRATA	GRANT, COUNTY OF	PND00934	860.2375	YP
KELSO	KELSO, CITY OF	PND01597	154.9500	PP
KENT	WASHINGTON, STATE OF	PND02070	868.0875	YF
KENT	WASHINGTON, STATE OF	PND02070	868.1125	YF
KENT	WASHINGTON, STATE OF	PND02070	868.9875	YF
MATTAWA	GRANT, COUNTY OF	PND00934	856.2375	YP
MATTAWA	GRANT, COUNTY OF	PND00934	857.2375	YP
MATTAWA	GRANT, COUNTY OF	PND00934	858.2375	YP
MEDICAL LA	MEDICAL LAKE, TOWN OF	PNR11433	155.0550	PL
MOSES LAKE	GRANT, COUNTY OF	PND00934	856.4625	YP
MOSES LAKE	GRANT, COUNTY OF	PND00934	857.4625	YP
QUILCENE	WASHINGTON, STATE OF	PND01139	866.0375	YF
QUILCENE	WASHINGTON, STATE OF	PND01139	866.1375	YF
QUILCENE	WASHINGTON, STATE OF	PND01139	866.6125	YF
QUILCENE	WASHINGTON, STATE OF	PND01139	866.6375	YF
QUILCENE	WASHINGTON, STATE OF	PND01139	867.0375	YF
QUILCENE	WASHINGTON, STATE OF	PND01139	867.1375	YF
QUILCENE	WASHINGTON, STATE OF	PND01139	868.0375	YF
QUILCENE	WASHINGTON, STATE OF	PND01139	868.1000	YF
QUINCY	QUINCY SCHOOL DISTRICT 144 101	PND02041	47.6600	PS
SUNNYSIDE	ROSLYN, CITY OF	PNR11565	155.0100	PP
SUNNYSIDE	ROSLYN, CITY OF	PNR11565	155.1300	PP
TONASKET	OKANOGAN CO FIRE DIST 4	PND02004	154.4150	PF

Wisconsin

	BROWN, COUNTY OF	PNR11290	153.8750	PL
	BROWN, COUNTY OF	PNR11290	154.0400	PL
CAMBRIA	COLUMBIA, COUNTY OF	PND01679	154.1450	PF
CHILTON	WISCONSIN, STATE OF	PND01264	151.2800	PL
COTTAGE GR	COTTAGE GROVE, VILLAGE OF	PNA00001	153.8450	PL
DE PERE	BROWN, COUNTY OF	PNR11290	154.0400	PL
FENNIMORE	FENNIMORE RESCUE SQUAD	PND01515	150.7900	PM
GREENFIELD	GREENFIELD, CITY OF	PNR11306	154.7400	PP
HOWARD	BROWN, COUNTY OF	PNR11290	154.0400	PL
KENOSHA	KENOSHA, CITY OF	PND02005	150.7750	PM
LODI	COLUMBIA, COUNTY OF	PND01679	154.1450	PF
NEDA	WISCONSIN, STATE OF	PND01264	151.2800	PL
PLEASANT P	WISCONSIN, STATE OF	PND01264	151.4600	PP
PORTAGE	COLUMBIA, COUNTY OF	PND01679	154.1450	PF
RAYMOND	WISCONSIN, STATE OF	PND01264	151.4600	PP
RIO	COLUMBIA, COUNTY OF	PND01679	154.1450	PF
RIO	COLUMBIA, COUNTY OF	PND01679	154.2650	PF
RIO	COLUMBIA, COUNTY OF	PND01679	154.2950	PF
RIO	COLUMBIA, COUNTY OF	PND01679	154.4300	PF
SHEBOYGAN	AMERICAN RED CROSS	PND00935	47.4200	PS
TOWNSEND	TOWNSEND, CITY OF	PNR11696	154.2350	PF
TOWNSEND	TOWNSEND, CITY OF	PNR11696	154.2950	PF

West Virginia

	GRAFTON, CITY OF	PNR11742	45.2400	PL
GRAFTON	GRAFTON, CITY OF	PNR11742	45.2400	PL
WEST UNION	DODDRIDGE, COUNTY OF	PNA00005	39.9400	PP
WEST UNION	DODDRIDGE, COUNTY OF	PNA00005	39.9800	PP
WESTOVER	WESTOVER, CITY OF	PND01595	155.1300	PP

Wyoming

	CAMPBELL, COUNTY OF	PND02042	154.7400	PP
	CAMPBELL, COUNTY OF	PND02042	154.8450	PP
	CAMPBELL, COUNTY OF	PND02042	154.8750	PP
	CAMPBELL, COUNTY OF	PND02042	155.0100	PP
GILLETTE	CAMPBELL, COUNTY OF	PND02042	154.8450	PP
GILLETTE	CAMPBELL, COUNTY OF	PND02042	154.8750	PP
GILLETTE	CAMPBELL, COUNTY OF	PND02042	155.0100	PP
GILLETTE	GILLETTE, CITY OF	PND02041	154.6950	PP
GILLETTE	GILLETTE, CITY OF	PND02041	154.7700	PP
GILLETTE	GILLETTE, CITY OF	PND02041	154.8750	PP
WRIGHT	CAMPBELL, COUNTY OF	PND02042	154.8450	PP
WRIGHT	CAMPBELL, COUNTY OF	PND02042	155.0100	PP

USSN

U. S. Scanner News Reprints

Reprints are made from the best available copy. They are made on a photocopy machine and folded into 8.5"X11" format. Circle the issues you would like to order and send to the address on other side with payment; or call your order in with a credit card. $3.00 per Issue. AOR AR–8000 articles are in bold underline.

1988 Volume One (10 Issues)

Jan/Feb–P/R Realistic PRO 2004

Mar–Cell Phone Freq. Layout-Pro 2004 Mods-Police Band Allocations

Apr–P/R Radio Shack Discone-Amateur Radio Bandplan-P/R Bearcat BC 600XLT-Fire Band Allocations

May–FBI-Blue Angels-P/R Regency TS 800 Model 2

Jun–Military Airlift Command-Electronic Comm. Privacy Act-Allocations: 30.000 MHz to 30.980MHz, 150.010MHz to 150.995 MHz, 406.125 MHz to 406.975 MHz

Jul/Aug–Aircraft At Forest Fires-800 MHz Trunking-Allocations: 31.000 MHz to 31.980 MHz, 151.010 MHz to 151.985 MHz, 407.000 MHz to 407.975 MHz

Sep–P/R Bearcat/Uniden BC205XLT-P/R Bearcat/Uniden BC200XLT-Riding The Rails, RR Frequencies-Allocations: 152.0075 MHz to 154.995 MHz

Oct–MARS Military Affiliate Radio System-P/R GRE Super Converter-BC200/205XLT Cell Mods-McChord AFB-800MHz-Allocations: 155.010 MHz to 157.980 MHz

Nov–P/R Realistic PRO 34-Realistic PRO 34 Cell Mods-Cell Phone Monitoring-GRE Mods

Dec–P/R AR3000-P/R AR880-P/R Antenna Specialties MON 52 Antenna-Allocations: 158.010 MHz to 158.985 MHz

1989 Volume Two (12 Issues)

Jan–P/R Larsen Dual Band Antennas-P/R Cobra SR 925

Feb–G.M.R.S.-Air Refueling-Allocations: 159.000 MHz to 159.990 MHz

Mar–Pro 2004 MODS-Aerial Demonstration Teams-Monitoring The Goodyear Blimps-Allocations: 160.005 MHz to160.9950 MHz

Apr–A Look At The Spectrum-Aerial Demonstration Teams-BC-200XLT Again (See Sep. 88 Reprint)

May–FAA -P/R Realistic PRO 2005-P/R AOR AR900-P/R GW 1 Pre-Amp-BC200/205XLT Cell Mods-Aerial Demonstration Teams

USSN

Jun–Aircraft Communications-Aircraft Allocations Table-BC 200XLT Update-Meteor Burst Communications-Aerial Demonstration Teams

Jul–Aeronautical En route-P/R Lapel Mike-Forestry Conservation-US Forest Service-AOR vs Uniden-Aerial Demonstration Teams-Allocations: 161.010 MHz to 162.000 MHz

Aug–TV Sound-Aircraft En route Frequencies-Aircraft Ground Control-Aerial Demonstration Teams

Sep–Aircraft Telephone-Aircraft Flight Test Frequencies-Telecommunications Act Of 1989-Aerial Demonstration Teams

Oct–Coax And Your Scanner-BC 200XLT Update-Hot Times On The Police Band-The Communications Act Of 1934-AWOS Automated Weather Observation System- Additional Aircraft Information-AMSAT-Power Radio Service

Nov–P/R AOR 950-P/R GRE Super Converter II-Monitoring Repeater Inputs-Allocation Table-RF Connectors-Portable Antennas

Dec–P/R Search and Store Module Model SS 45 For 2004, 2005-BC 200XLT Final Chapter-Cellular Information-DXing Low Band-Portable Antennas-1989 Index

1990 Volume Three (12 Issues)

Jan–P/R PS 90 Search and Store Module For PRO 2004, 2005-Highway Maintenance (National Band Plan and Freq. Code)-SF Quake of 89-Scanner Boredom

Feb–Refueling Frequencies-P/R Super Amplifier-Turbo Scan 800 TS 2 Power Fix

Mar–P/R RAC Frequency Log Program-Allocations 162.000 MHz to 173.39625 MHz

Apr–P/R Leisure Electronics DSS 8 Digital Scrambler Silencer-Mobile Data Terminals-P/R Regency INF 7 Scanner-Telephone Maintenance Radio Service-Nicad Battery Test Jig

May–P/R Regency Informant Series-Do It Yourself Glass Mount Antenna-FBI Profile Pt 1-Airshows

Jun–P/R Radio Shack PRO 2022-FBI Profile Pt 2-Forest Products Radio Service-P/R Scan Manager Software

Jul–Aircraft Communication-Drive Up Windows-P/R PRO 2006-P/R Max 800 Antenna-Allocations 450.010 MHz to 450.990 MHz

Aug–Pilot To Metro And WX Radar Facilities-Airshow-FBI Profile Pt 3-Allocation Table

Sep–Cher Concert-P/R Discone Antennas-P/R Realistic PRO 36-Allocations 453.000 MHz to 453.975 MHz

Oct–P/R MON 58 Antenna-A Look Inside Your Antenna-800 MHz Aircraft Mobile Phone-P/R AR 2515

Nov–Alcohol Tobacco Firearms ATF-P/R AR 1000-Motor Carrier Radio Service

Dec–After market Products For Portable Scanners-Allocations 454.000 MHz to 454.975 MHz

1991 Volume Four (12 Issues)

Jan–Optoelectronics Frequency Counters-Antennas And Coax-Introduction to 800 MHz

Feb–Frequency Counters-Simple Mobile Charger/Power Cord-P/R AR 3000-800 MHz Private Land Mobile Service-Intelligence Codes/Phrases/Etc-Scanner

Repeater Mod

Mar–Future Of Scanning-P/R Radio Shack All Band Mobile Antenna-800 MHz Private Land Mobile Services-Pro 2004 Display Problem-Monitoring The Blue Angels

Apr–PRO 2004 Display Backlight Fix-FCC Notice Of Inquiry-800 MHz Private Land Mobile Services-Trunked Systems-Public Safety Bands

May–PRO 2022 800 MHz MOD-P/R GRE Superconverter 9001-Amateur Radio And Scanning-Automated Maritime Telecommunications Systems-The Manufacturers Radio Service

Jun–P/R Icom IC 24AT-929 MHz Paging-P/R GRE 3001 Super Amplifier-Military Radio Systems-P/R Trident Highway Information Scanner

Jul–Icom IC 24AT Pt 2-P/R Alinco DJ 560T-Marine Radio Monitoring-200 MHz Band-P/R Startek Frequency Counters

Aug–800 Mhz-VHF, UHF Ducting Effect-P/R AR 2500 with software-P/R Lakeview 16 Discone

Sep–FCC Authorization Act of 1991-1991 Index-Club Directory

Oct–P/R AOR AR 2800-Everything You Ever Wanted To Know About GMRS

Nov–Canadian Scanner Frequencies-Kansas 800 MHz Plan-Club Directory

Dec–Frequency Counters-P/R Radio Shack HTX 202-Aircraft Carrier Landings-1991 Index

1992 Volume Five (8 Issues)

Jan–Traveling With Your Radio-P/R PRO 37-Allocation Table

Feb–New Jersey Scanner Law Reform-P/R Shinwa SR001 Scanning Receiver-Cell Phone Frequency Plan-P/R ACE GW 2 Wide Band Amplifier

Mar–P/R Icom R–1-Frequency. Counters-Cellular Channel Plans

Apr–P/R Ventenna Model VT 15S-Auto Racing-P/R Icom R 100-Public Safety Log Sheet-P/R Alinco DJ 580L

May–Speed Traps-Federal Aviation Administration (FAA)-Aircraft Allocation Table-Military Airlift Command(MAC)-US Forest Service-Legalities Of Monitoring

Jun/Jul–Amateur Radio In Space-NASA Frequencies-Nickel Hydride Rechargeables-Aeronautical En route Frequencies-Guide To AOR AR1000-GMRS-Frequency Search Table

Aug/Sep-P/R Radio Shack PRO 43-VHF Aircraft Allocations

Oct/Nov–P/R Startek Frequency Counter BG 15-Catalog Sources-Flight Monitoring-Clubs and Publications Directory

1993 Volume Six (2 Issues)

Dec 92/Jan93-Mon. The Shortwave Band–ATIS Oper.

Feb/Mar–Government Trunking Frequencies-Military Aircraft On Your Wideband Scanner-Aircraft Cockpit During Climb Out-Airshow Frequencies

1994 Volume Seven (4 Issues)

Sep–The Rat Patrol Police Direction Finding Catches Bank Robbers-Sleuthing Private Detective Agencies With National Frequency Listing-Antenna Gain And Directionality-Trunking And Encryption Systems How To Listen In-Parachute Jumping and Sky Diving-Jump Zones And Frequencies-Direct Satellite Scanning-Scanner DX-Introduction To Scanning

Oct–Ground Plane Antennas-P/R Optoelectronics R10 Interceptor-Automated Surface Observing System With National List-Trunking and Search Steps-Air to Air Refueling With National Map and Frequencies-Book Review: Beyond Police Call-Astronaut Hams

Nov–How The Signal Gets To Your Antenna-P/R Radio Shack PRO 2035-Motorola Coverage PLUS-Med Net Channels-P/R BC 200XLT-House Bill HR4922 Interception Of Digital and Other Communications-Air Traffic Control Centers With Maps-137 MHz Satellite Band-Oil Spill Clean Up Frequencies

Dec–Civil Air Patrol-Halfwave Dipole-Monitoring Military Satellites-SAR Search And Rescue-Personal Communications Service-State Highway Maintenance With State Frequencies

1995 Volume Eight 11 Issues

Jan–AOR AR 8000 Pre-Review-Antennas for today's scanners-1995 Police Call-The National Scanner Source Book-Weather Satellites-Phoenix Air-Public Safety; Fire Departments-Railroad frequencies for the entire USA-Finding hidden frequencies-Aviation; The Hawaiian Islands frequencies-P/R JIM M 75 Pre-Amp-FCC News;1.6MHz Mobile Satellite Service

Feb–Product Review, AOR AR8000-Space communications and you-Annual guide to Air Shows with frequencies-Cell phone & OJ-Nellis Air Force Base home of the ASAF Thunderbirds-dband Wideband and Multiband Antennas-Aviation; Alaska aviation frequencies-Tune In logging program-National car racing frequencies-P/R Opto Electronics Scout Model 25-FCC News; 911 compatibility

Mar–P/R Radio Map-Space research frequencies-Phase inversion explained-P/R Ramsey scrambler/descrambler-Antennas, the yagi beam-Offutt Air Force Base-800MHz public safety frequencies Alaska through Massachusetts-Opto model 25 scout revisited-Microwave mobile band

Apr–USSN BBS Online Computer System-Aviation, Norfolk VA-UHF Satellite terminal system-Antennas for weak signals-P/R Startek ATH-10 counter-800MHz public safety frequencies Maryland to Wyoming-Much More

May–900MHz Cordless phone-P/R Percon Spectrum Data base-Vehicle Tracking-Aviation, Florida Keys to Virgin Islands-136-174MHz Satellites-Scanner Antennas-Finding frequencies-February FCC public safety updates-FCC News

Jun–US Gov't trunking-Amateur tcvrs out of band operation-Aviation; Atlanta GA frequs-Shuttle flight profile-Direction finding for scanners-Dayton 95-Call Boxes-Mar. FCC Updates

Jul–Cubical quad antenna-US Customs Service-Monitoring 800MHz Trunked systems-To10 shuttle MIR frequs-P/R AOR AR2700-Beginners corner purchasing a scanner-Special emergency radio service-April FCC updates-P/R ICOM R7100

Aug–US Immigration & Naturalization Service-New Frequencies Allocations-Antennas for those new frequencies-FCC Call Signs-Railroad Monitoring w/

frequencies-Transportation; E central MN, NW Wisconsin-SCPC Comms-Jim 51 Preamp-EMMRS-May FCC updates

Sep–Bureau Alcohol Tobacco & Firearms Pt. 1-Antennas maximize signal to noise ratio-Transportation Ptld OR-The future of space comm-P/R Uniden BC-9000-Police Monitoring-June FCC Updates-GTE Tele Go-Book Review Cheek 3

Oct–Editorial "Scanning Outlawed"-Bureau Alcohol Tobacco & Firearms Pt. 2-Boeing 777-Feed lines transmission lines-Scanning the Internet-Priority Function-P/R Sky Scan Desk 1300-Transportation Delaware-SARSET Search & Rescue-P/R Optoelectronics Scout 40-July FCC Updates-P/R **Pro 60-AOR 8000 expert mode**

Nov–Looking for your Federal Gov't-Lightning protection & long wire beams-Law enforcement communications security-New cordless phones-10 commandments of scanning-Transportation; Kansas City KS & Missouri areas-The IRIDIUM System-P/R AOR SDU 5000-Public safety; Nassau County NY-FCC license applications for Aug.

1996 Volume Nine 5 Issues

Dec/95 Jan/96–US Bureau of prisons-Antenna system accesories-P/R Optoelectronics OptoScan OS 535-Monitoring the National Weather Service-Transportation Memphis TN-Space Antennas-**AOR 8000 technical stuff**-Putting a scanner in your car-Public Safety Nassau County NY-FCC license applications for Sep.-Scanning like a pro-**AOR 8000 the 8k band plan**

Feb–Gov't Printing Office Access-Discone Antennas, Preamps and more-Scan*Star for Windows-Being a Comfortable Scanner Monitor-The Other Half, renumbering the Ten Code-Transportation, Corpus Christi Area-Amateur Astronauts-Interference Filters For Your Scanner-Scanning the Hidden World of Radio Waves-Local Gov't Radio Service-FCC License Applications-Goodyear Blimps-Make a Junkbox Antenna-**AOR AR8000 Data Channel** Bypass-FCC News, Remote Sensing Satellite systems

Mar–Police Call Plus 1996-P/R M1200 Decoder Card-US Secret Service protecting the President-Beam antennas-Scanning the Internet-The Other Half, New Years Resolutions-Transportation Burlington Alabama-Phase Three Amateur Satellites-Pro 26 Technical notes-Public Safety Catskill Region New York State-FCC license applications-FCC News Commercial Mobile Radio Services annual report

Apr–ARINC Aeronautical Enroute Frequencies-EMS Emergency Medical Service-Drug Enforcement Admin (DEA)-Transportation, Oklahoma City Area-Antennas, Diversity Communication-Beginners, Antenna Basics-Technical Stuff, Message Tracker-Computers, Probe Ver. 2.0 Beta-Fireground Radio Operations-Space Shuttle & MIR-Monitor America Review-2GHz Mobile Satellite Service-Internet Usenet-Remote Scanning-Public Safety License Applications update

May–Annual Air Show Issue-Blue Angels, Thunderbirds, Snowbirds Part 1 Schedule With Frequencies-Air to Air Refueling-Centers for Disease Control (CDC)-Weak Signal Reception-Transportation, Bangor Maine Area-Scancat and Scancat Gold Review-Biomedical Telemetry-Scanner Shopping on the World Wide Web-Book Review, "Scanning Secrets: Buying, Owning and Operating a Scanner-Product Review, AEA ACARS Decoder-Diplexers-Shortwave on Satellite-**AOR 8000 and a Tape Recorder**-License Applications for April-How to Set Up Channel Banks in Your Scanner

Complete Volumes

Volume 1, 11 issues $24.95
Volume 2, 12 issues $27.95
Volume 3, 12 issues $27.95
Volume 4, 12 issues $27.95
Volume 5, 8 issues -$18.95
Volume 6, 2 issues -$5.95
Volume 7, 4 issues -$11.95
Volume 8, 11 issues $24.95
Volume 9, 5 issues -$13.95
Eight Volumes 1–8--$149.95
Nine Volumes 1–9---$159.95

All Prices Include 4th Class Shipping.

For Priority mail add
$3.00 for up to 5 issues;
then 25¢ ea. for each issue ordered after 5
with a maximum of $15.00.
Send Name & Address
with check or money order to:

US Scanner Publications,
PO Box 14923
Portland, OR 97293-0923

Or Call 1–800–890–6999 with a credit card.
Please Print ***Clearly***

Name _____

Address _____

_____

City _____

State, Zip _____

Visa/MC/Discover # _____

Expires _____

Signature _____

NEW

$129

Get Linked

MULTIPLE RADIOS, MULTIPLE FUNCTIONS

Multiple uses; featuring the latest breakthrough from Optoelectronics, the ***OPTOLINX*** universal interface. The ***OPTOLINX*** adapts for use with a wide variety of Radios, Scanners, Decoders, Frequency Counters, and GPS Receivers. Both full and half duplex devices can be connected simultaneously and switched between them under software control.

Multiple Radios; the ***OPTOLINX*** is the only interface that allows full duplex receivers, like the AOR AR8000 and AR3000A, to be connected with half duplex receivers, like the ICOM R7000, R7100 and R9000, for multiple radio computer controlled scanning, allowing complete versatility that no other interface can match.

Multiple Functions; the ***OPTOLINX*** interfaces the Optoelectronics' DC440 decoder with any ***OPTOLINX*** compatible receiver for CTCSS, DCS, and DTMF decoding under computer control. The ***OPTOLINX*** also connects the Optoelectronics **M1** frequency counter to a PC for real time datalogging using **Optolog** software.

The ***OPTOLINX*** also incorporates additional features such as the software controlled tape recorder output, 9 pin mini DIN connector for single cable custom radio connection, and the ALL EXCLUSIVE NMEA-0183 interface for GPS or LORAN receivers.

•*Future Software Development by Software Design Companies will allow Real-Time position mapping.*

FEATURES

- •Computer control AR2700 and AR8000 using supplied FFC cable
- •Computer control ICOM R7000, R7100 and R9000
- •Download Scout frequencies to the PC
- •NMEA-0183 interface for GPS and LORAN receivers
- •Interface AR3000A with **DC440** for decoding CTCSS, DCS, and DTMF data under computer control
- •Interface **M1** frequency counter for datalogging with **Optolog** software
- •Switch between full and half duplex radios using remote or external switch
- •9 pin mini DIN connector for single cable custom radio connection
- •Interface multiple radios in a star network configuration

•Built in NMEA-0183 Interface for GPS interface. OPTOLINX shown with Trimble GPS, and AOR AR8000 Scanner.

FACTORY DIRECT ORDER LINE 800•327•5912

OPTOELECTRONICS

MADE IN USA

5821 NE 14th Avenue• Ft. Lauderdale, FLA.• 33334

Visa • MasterCard • COD• Prices and Specifications are subject to change without notice or obligation

Internet: http://www.optoelectronics.com

Tel: 954•771•2050 Fax: 954•771•2052

Capture the action!

Don't Miss Out!!

Purchase a Scout for only $449.00
& Receive Free:
- DB32 Mini Antenna
- CC30 Carry Case
- Spectrum FCC CD

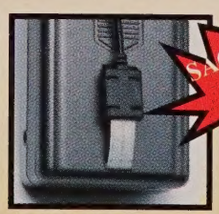
Total package value $526.00
For only $449.00
LIMITED TIME ONLY

$449

Scout® Reaction Tune® brings you all the action. Whether it i police, fire, commercial or just everyda communications monitoring, the Scou will bring you closer to the action. Th Scout will not only capture the frequency, bu it automatically tunes the receiver to that fre quency at the same time; (*see receivers app below*). Let the Scout Reaction Tune your wa into the world of communications.

FEATURES

- Records up to 400 unique frequencies in memory
- Records up to 255 hits on each frequency in memory.
- 10MHz - 1.4GHz single frequency range.
- Records frequencies automatically with Patented Digital Auto Filter & Digital Auto Capture.
- Reaction Tune the AOR AR8000, AR2700, ICOM R7000, R7100, R9000, Radio Shack Pro 2005/2006 with OS456 installed, and the Radio Shack Pro 2035/2042 with OS535 installed.
- All frequencies are automatically saved until deleted.
- Interface to a PC with the optional ***OPTOLINX*** or the ***CX12AR*** for data download.
- Custom 10 digit LCD display with automatic EL backlighting.
- 16 segment RF signal strength bargraph.
- Pager style vibrator for discreet recording. Distinctive beeper indicates frequency detection.
- Rapid charge NiCads with AC charger supplied; 2 hour recharge and 8-10 hour battery discharge.



SAC8000 $35

• Using the optional SAC8000 is a snap-Just plug and play. SAC8000 includes cable, back panel with slot, and velcro attachments.

SPECS

Frequency Range: 10MHz - 1.4GHz
Input Amplifier: 50 Ohm vswr <2:1
Sensitivity: 1mV 30MHz - 900MHz
Maximum Input: +15dBM, 50 milliwatts
Display: 10 digit LCD with backlight

Operating Time: 8 - 10 hours
Power: 2VDC 1 Amp wall plug adapter for rapid charging. 6VDC 130mA minimum operating power required. AC90 adapter supplied.

Factory Direct Order Line: 1-800-327-5912

MADE IN USA

OPTOELECTRONICS®

5821 NE 14th Avenue • Ft. Lauderdale, FL 33334

Visa, MasterCard, C.O.D. Prices and Specifications are subject to change without notice or obligation
All specials and givaways are subject to change without notice or obligation.

Internet: http://www.optoelectronics.com

Phone: 954•771•2050 Fax: 954•771•2052